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VOL. XVII. NO. 20

OCT. 15, 1889.

PEACE ON EARTH & GOOD-WILL TOWARD MEN



CLEANING
IN

BEE CULTURE

DEVOTED
TO

THE BEE

& HOME INTERESTS.

MEDINA, OHIO

BY

AL ROOT

TERMS, ONE DOLLAR PER YEAR.

Wm. Conrad

250

Discounts to those Who Order Goods for Next Season's use Now.

According to our usual custom, we offer the following discounts for early orders. The reasons for this are many, and the reasons why you should take advantage of our offer are many more. Our main reason for making the offer is to divert as much as possible of the trade out of the very crowded months of the spring into the fall and winter, and thus equalize business as much as possible. If you know pretty well a large part of your next spring's needs, you should by all means anticipate these needs for these reasons, and many more that might be named.

1. It is to your profit, if you have the money to invest, both in the first cost of the goods and in the economy in preparing them for use. You can nail your stuff together more economically in the winter time, when there is not much else to do, than at any other time. Hives painted in the winter will become thoroughly dry by the time you are ready to use them, and will last much longer.

2. By anticipating your needs you can give the goods ample time to reach you by freight. Time and again the past season, customers have sent large orders for goods by express, and said they knew the charges would be high, but they could not wait for freight; they must have the goods at once." These high charges might have been saved by a little forethought.

3. By ordering early you avoid the danger and worry of having your orders delayed, and the risk of losing a large part of your honey crop thereby. The past season, as near as we have been able to learn, all supply-dealers were more or less behind on their orders. This is no more than should be expected with such an unusual demand. Our goods, from their nature, being bulky, it is manifestly impossible to stock up sufficiently to meet such a demand, and it is also impossible to meet the demand by extra help and machinery, because competent help can not be had in a day, and the extra work must necessarily be of a poor quality. The easiest and most sensible way out of the difficulty is for you who know your needs to have them supplied ahead; and if you haven't looked far enough, and should want more goods in the spring in a hurry, we will try to remember how you helped us out, and will in return give you as prompt attention as possible.

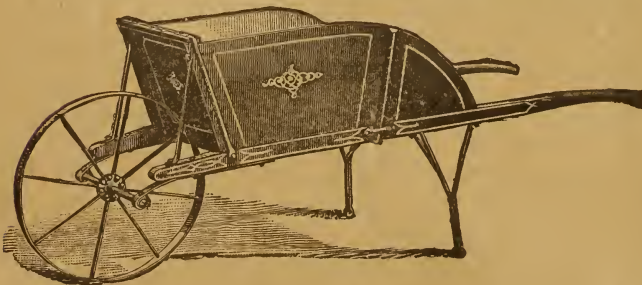
We have decided on the following discounts, which are sufficiently liberal to make it a profitable investment for you, and the discounts will apply to every thing in our catalogue ordered for next season's use. They can not, of course, apply to large orders for counter goods or honey-packages; but if only a few of them are included with an order for hives, etc., then the discount may be taken from the whole bill.

Up to Nov. 1st, discount will be 5 per cent. After that date, one per cent a month for each month before March; i. e., 4 per cent in November, 3 per cent in December, 2 per cent in January, and 1 per cent in February. One per cent a month is equal to 12 per cent per annum, and money can be had in most places for 6 and 8 per cent, so that you see that, although our offer is not quite as liberal as formerly, it is still profitable, and we trust that many of you will find it to your advantage to avail yourselves of it. Remember, our discounts for large orders on page 2 of catalogue are applicable in addition to above discounts.

Respectfully,

A. I. ROOT.

OUR DAISY WHEELBARROW.



Who has not felt the need of a **Light, Strong, and Durable** wheelbarrow at the same time? One that combines all these qualities better than any other we have ever seen. We have sizes—the smaller one weighs only 35 lbs., and yet it will carry 500 lbs. safely, and it is packed so closely together for shipment that you can take the whole thing under your arm and walk off easily. The wheels are flat spokes instead of round legs are steel, so they will never break nor bend, even if you bump them on the sidewalk.

The springs are oil-tempered, with adjustable bearings, so the wheel will always run free. More than all, the wheelbarrows are the nicest job of painting and varnishing, I believe, I ever saw, for a farm implement. They are handsome enough to go around town with, and strong enough to do heavy work; and yet the price of the small size No. 3 is only \$4.00; the larger size No. 2 is \$4.25. Over 200 sold in 8 months.

A. I. ROOT, Medina, Ohio.

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SPECIAL NOTICES.

DISCOUNTS FOR ORDERS RECEIVED BEFORE NOV. 1.

Remember, there is less than two weeks' time to get in orders so as to get the best rates mentioned on the first page of the cover.

FULLER'S STRAWBERRY CULTURIST.

The little book we have been so long selling for 15c is now revised, enlarged, and put in stiff covers. The usual retail price is 25c. Our price is 20c; and if wanted by mail, 3c more for postage. The revision was made in 1887. Please take the above price instead of 15c, as it appears on the cover of this issue.

AN APPENDIX TO DOOLITTLE'S BOOK ON QUEEN-REARING.

An appendix to "Scientific Queen-Rearing," by G. M. Doolittle, is given in the Second Edition, which details his further experiments in his methods of queen-rearing.

This appendix will be mailed free of cost to all who have the first edition, upon application at this office. It is now ready for delivery. The second edition of this interesting book will be mailed to any address, postpaid, for \$1.00.

JERSEY WAKEFIELD CABBAGE SEED.

We have just purchased from H. A. March his entire season's crop of stock seed of the Extra Early Jersey Wakefield cabbage. It is my impression that there is no better strain of this cabbage seed to be had in the world. Notwithstanding this is stock seed, so long as our supply lasts our price will be as heretofore: Packet, 5c; oz., 20c; lb., \$2.50. If wanted by mail, add the usual 9c extra for postage and packing. As our supply is limited, it may pay you to order what you shall need for the next season, at once. Our friends in the South will need to plant it now—that is, wherever cabbages winter in the open air. See below what friend March says in regard to the seed furnished us:

FRIEND ROOT:—We have saved the stock seed for you, and it is No. 1—the choice heads of over two acres of seed. D. M. Ferry & Co. gave me cabbage and cauliflower seed a good trial, and have bought over \$3000 worth of me. One of the firm took the trouble to come out to Puget Sound on purpose to see our seed-farm and our manner of growing seed. He was so well pleased that he ordered every pound we had. H. A. MARCH.
Fidalgo, Wash. Ter., Sept. 7.

Bee-Keepers & Supply-Dealers, Please Take Notice.

We will allow a heavy discount this fall and winter on all orders received for supplies. Estimates gladly furnished, and correspondence solicited.

Our new price list will be ready about Dec. 1st. Send for it. 20tfcd

A. F. STAUFFER & CO.,
Mention this paper. Sterling, Ill.

ODD BUT TRUE.

Send me the names of 10 regular subscribers to the American Agriculturist, or Ladies' Home Journal, and I will give you next season your choice of the following: 1 untested Italian queen, 13 Laced Wyandotte eggs, 13 B. Leghorn eggs, or 10 S. S. Hamburg eggs. All I want is the names of 10 persons who take either of the papers. Write for catalogue of nearly 2000 papers at reduced rates.

C. M. GOODSPEED, Thorn Hill, N. Y.

In responding to this advertisement mention GLEANINGS.

THE BEE-KEEPERS' REVIEW.

A 50-cent monthly that gives the cream of apicultural literature; points out errors and fallacious ideas; and gives, each month, the views of leading bee-keepers upon some special topic. Three samples free.

W. Z. HUTCHINSON, Flint, Mich.

Please mention GLEANINGS.

13tfdb

APIARIAN SUPPLIES CHEAP.

BASSWOOD V-GROOVE SECTIONS, \$2.75 to \$3.75
PER M. SHIPPING-CASES VERY LOW.

SEND FOR PRICES.

COODELL & WOODWORTH MFG. CO.,
3tfdb **ROCK FALLS, ILLINOIS.**

In responding to this advertisement mention GLEANINGS.

BEES SEND for a free sample copy of the
BEE JOURNAL—16-page Weekly
at \$1 a year—the oldest, largest and
cheapest Weekly bee-paper. Address
16tfdb **BEE JOURNAL, Chicago, Ill.**

Wants or Exchange Department.

Notices will be inserted under this head at one-half our usual rates. All ads intended for this department must not exceed 8 lines, and you must say you want your ad in this department, or we will not be responsible for any error. You can have the notice as many lines as you please; but all over five lines will cost you according to our regular rates. This department is intended only for bona-fide exchanges. Exchanges for cash or for price lists, or notices offering articles for sale can not be inserted under this head. For such our regular rates of 20 cts. a line will be charged, and they will be put with the regular advertisements.

WANTED.—To exchange honey for beeswax. We will take beeswax in exchange for honey in any quantity. Will give three pounds for one. Write for particulars.
18tfdb **CHAS. DADANT & SON,**
Hamilton, Hancock Co., Ill.

WANTED.—To exchange 10,000 Cuthbert raspberry-plants, for sections, foundation, or extracted honey. I will give a bargain on the above plants.
19-20d **P. D. MILLER, Grapeville, Westm'd Co., Pa.**

WANTED.—To exchange improved Hammon-ton Incubator, capacity 240 eggs, new, for honey or offers. A bargain.
20-21d **FINIS A. WOOTTON,**
Skilesville, Muhlenberg Co., Ky.

WANTED.—To exchange a first-class self-regulating Incubator, Brahmas and Langshans. Want an extractor, foundation-mill, bees and supplies.
20d **F. T. WEATHERILL, Jonesville, N. Y.**

WANTED.—To exchange 2 L. frame nucleus, with tested Italian queen, worth \$1.00, queens, each, 50c, for white paint, or offers.
MRS. OLIVER COLE, Sherburne, Chen'o Co., N. Y.

WANTED.—All persons who would like to secure a home in the South, to read my advertisement in GLEANINGS for Sept. 15, page 728.
DR. C. F. PARKER, Mentone, Ala.

Black and Hybrid Queens For Sale.

Nine dozen black and hybrid queens, \$2.50 per dozen.
ANTHONY OPP, Helena, Ark.

BEE-HIVES, SECTIONS, ETC.

WE make the best bee-hives, shipping-crates, sections, etc., in the world, and sell them cheaply. We are offering our choicest white one-piece 4½x4½ sections, in lots of 500, at \$3.50 per 1000.

Parties wanting more, write for special prices. No. 2 sections, \$2.00 per 1000. Catalogues free, but sent only when ordered. 1tfdb

C. B. LEWIS & CO., Watertown, Wis.

In responding to this advertisement mention GLEANINGS.

RERUM COGNOSCERE CAUSAS,

TO know the Causes of Things, is the key to Success in any industry. If you wish to succeed in the **Bee Business**, you must read and become acquainted with the most Successful Methods of Bee-Management and Honey-Production.

LANGSTROTH'S WORK,

REVISED BY DADANT,

Contains the result of practical experience with Bees. It gives the Physiology of the Bee, with numerous Quotations from the latest Scientific Writers, the Description of the best Hives, Directions for the Proper Management and Handling of Bees; the most Practical Methods of Queen-Rearing, Swarming (Natural and Artificial), with controlling methods; instructions on Establishing Apiaries, Transferring, Shipping, Mailing, Feeding, Wintering; the best methods of producing Comb and Extracted Honey, the Handling and Harvesting of Honey, the Making of Comb Foundation, etc., etc.

The instructions for the **Rendering of Beeswax** are alone worth the price of the Book, to many bee-keepers who waste a part of their wax in rendering it.

This book, "the most complete ever published," is shortly to be published in the French, Italian, and German Languages, by Practical European Apirists. It is highly recommended by all publishers of Bee-Literature in the Old World as well as in the New.

Cloth Binding, 550 Pages, 199 Engravings, 19 Full-Page Plates. Gilt front and back. This book is an Ornament to any Library.

Price: By Express, \$1.85. By mail, prepaid, \$2.00. Special prices to Dealers who wish to advertise it in their circulars.

We also offer for Sale, **40,000 Lbs. of Honey**, of our crop of 1889; **25 Tons of Comb Foundation**, Smokers, Bee-Veils of Imported Material, etc. Send for Circular. Address

3tfdb **CHAS. DADANT & SON,**
Hamilton, Hancock Co., Illinois.

In responding to this advertisement mention GLEANINGS.

FOR PURE ITALIAN BEES,
POLAND-CHINA SWINE, WHITE AND BLACK
FERRETS, WHITE RABBITS, WHITE
AND BROWN LEGHORN CHICKENS, AND
MALLARD DUCKS, ADDRESS
N. A. KNAPP, ROCHESTER, LORAIN CO., OHIO.
17tfdb

BEE-KEEPERS AND FRUIT-GROWERS,

Send for my price list of

BEE-KEEPERS' SUPPLIES AND STRAWBERRY-PLANTS.

Twenty-five varieties to select from.

Address F. W. LAMM,

Box 106, SOMERVILLE, BUTLER CO., OHIO.
18-23db

MUTH'S

HONEY-EXTRACTOR,

SQUARE GLASS HONEY-JARS,

TIN BUCKETS, BEE-HIVES,

HONEY-SECTIONS, &c., &c.

PERFECTION COLD-BLAST SMOKERS.

Apply to **CHAS. F. MUTH & SON,**

CINCINNATI, O.

P. S.—Send 10-cent stamp for "Practical Hints to Bee-Keepers." (Mention Gleanings.) 1tfdb

BEE-HIVES, SECTIONS, ETC.

We are now selling our No. 1 V-groove sections, in lots of 500, at \$3.00 per 1000; No. 2 sections at \$2.00 per 1000. For price of Italian queens, foundation, smokers, etc., send for price list.

J. STAUFFER & SONS,

Successors to B. J. Miller & Co.,

Nappanee, Ind.

16tfdb

In responding to this advertisement mention GLEANINGS.

KIND WORDS FROM OUR CUSTOMERS.

I received my bees all right. I am well pleased with them. **WESTON CARROLL.**
Union, Me., Aug. 30, 1889.

Smokers and A B C received. Both are all you claimed for them. **A. L. REDDEN.**
New Orleans, La., July 8, 1889.

Bees were received in splendid condition, and are doing well. Accept my thanks for promptness. **ALBERT WHITNEY.**
Birmingham, Mo., June 22, 1889.

I received the Dovetailed hive and sections all right. They give perfect satisfaction. **MRS. J. F. CONNER.**
Sand Beach, Mich., Oct. 1, 1889.

Here is another: Please leave out that ad't in GLEANINGS, for I have had so many orders for queens that I can't fill them all. **F. HOWARD.**
Fairfield, Ill., Sept. 8, 1889.

A GOOD WORD FOR SUPPLY-DEALERS.

The smoker is received, and I like it very much. You are as prompt as H. P. Langdon and W. T. Falconer. They both are grand good men to deal with. **COOPERSTOWN, N. Y.**
E. U. PARSHALL.

The A B C of Bee Culture is just splendid. I have got a good many good hints and lessons from it already, which will save me a good deal of work. **RAVENNA, MICH.**
HERMAN J. KUSIG.

I received the foundation I sent for, June 20, and I am very much surprised at the small amount of time you took to mail it to me, and also at the good quality. **JOHN MEL.**
Glenwood, Cal., June 24, 1889.

I received the queens in fine shape, and am well pleased. They are the yellowest I ever saw. I introduced them to a large colony of black bees, without trouble. **THOS. E. BLAM.**
Mulberry Grove, Ill., Aug. 31, 1889.

The queen-bee arrived safely and satisfactorily. I am well pleased with her and with your directions. I have introduced her successfully. She came to hand on the morning of the 15th. **C. R. MYERS.**
Flemington, Pa., Aug. 16, 1889.

I have the pleasure of acknowledging the arrival of goods in fine condition, and according to my order, for which I am pleased to inclose you a balance of — due you on above order, with thanks. Your method of packing goods is grand. **LITCHFIELD, ILL., AUG. 11, 1889.**
R. S. JOSEPH.

My husband bought a swarm of bees in the spring, and we were advised to get your A B C book. We did so, and that book is the most interesting one I ever read. I study it all the time. **MRS. I. S. NEWCOMB.**

Sioux Rapids, Ia., Sept. 14, 1889.

I received the nucleus I ordered of you, June 13. The bees were in fine condition. The queen is beginning to lay nicely. I notice from your card, that you shipped the bees the day you received my order. Thanks for your promptness. **J. M. THOMPSON.**

Sherrods-ville, O., June 17, 1889.

I received the queen you sent, all O. K. Many thanks for prompt delivery. M. FREISMUTH.
Wheeling, W. Va., Aug. 5, 1889.

SENDING QUEENS TO CALIFORNIA.

The select tested honey queen came to hand to-day in good condition; only one dead bee in the cage. J. F. MCINTYRE.
Fillmore, Cal., Sept. 11, 1889.

LAYING, THE THIRD DAY AFTER ARRIVAL.

The queen mailed me Sept. 6 arrived in good order. It was introduced according to instructions, and commenced laying the third day. Girard, Pa., Sept. 16, 1889. B. YOUNG.

I just received a sample copy of GLEANINGS. It is much improved since I last saw it. I enjoyed the sermon, also the sketch of "Huber," and many of the shorter articles. MRS. H. A. D. WESTOVER.
David City, Neb., Aug. 24, 1889.

SENDING STRAWBERRY-PLANTS TO MISSISSIPPI.

The plants recently ordered from you have been received in beautiful condition, and, like every thing else you do, the fulfillment is better than your promise. C. P. COFFIN.
Pontotoc, Miss., Sept. 30, 1889.

SENDING STRAWBERRY-PLANTS CLEAR TO OREGON.

The strawberry-plants came to-day in prime condition. Many thanks for your promptness. Bees are working now on white clover. It has bloomed since the rains. E. J. LADD.
Portland, Ore., Sept. 20, 1889.

A PLEASED CUSTOMER.

I thank you for your promptness with my orders for goods I got of you this spring and summer. The 22 one-story chaff hives came to hand all right. Every piece was number one. The queens are doing finely. E. M. BENNETT.
South Charleston, O., Sept. 19, 1889.

DOVETAILED HIVE JUST THE THING LONG LOOKED FOR.

The Dovetailed hives received, and are just what I have been looking for during the past three or four years. I have examined numbers of catalogues. Can I say more? G. F. AYRES.
Atherton, Ind.

Mr. Root:—I must thank you again as I report my success with the little package of Ignotum tomato seed you gave me; they gave us the first ripe tomatoes, growing alongside of other best varieties obtainable, with the same cultivation. I have never seen a tomato, with all the good qualities of the tomato combined, that the Ignotum has.

JAS. W. WALKER.

Green Spring, W. Va., Aug. 18, 1889.

A POUND OF BEES AND A QUEEN TO NEWARK, DEL.

The bees, etc., you shipped Sept. 23d were received in Newark, Del., Sept. 26, in the forenoon, in good condition. About 3 to 5 per cent of the bees were dead. The queen was alive and active. They are of fine color; the queen is very beautiful. I am well satisfied with the lot. I have given them some unsealed brood and honey, and will try to build them up rapidly. Express charges were 50 cts., which I think very reasonable. T. JAQUETT.
Newark, Del., Sept. 27, 1889.

I want to flatter you on your promptness in filling orders. The sections, foundation, and wax-extractor, all came in good time, and in good order. The sections are nice; the foundation is fine, and the wax-extractor is a daisy. The reason I had them sent by express was, I wanted to use them this summer, and I did not know whether they would get here in time by freight. T. BROWN.
Cloverdale, Ind., July 11, 1889.

GLEANINGS A NECESSITY.

I would say that I regard GLEANINGS as a household necessity, and a blessing to myself and family, not only temporally but spiritually. I think it would please you to know that "Uncle Amos" has a warm place in the hearts of all my family. Even our little four-year-old baby Georgie talks about

Uncle Amos, and says he loves him. May you live long, and continue to lead us by example and precept in the way you have in the past, is my desire. Tamora, Neb. S. H. BEAVER.

THE DOVETAILED HIVE JUST THE HIVE FOR THE GREAT MASS OF BEE-KEEPERS.

The Dovetailed hives ordered of you arrived in first-class order, and freight very moderate. We admire your ingenious method of crating, and are much pleased with the hives. We consider the Dovetailed as just the hive for that great class of bee-keepers who, farmers also, make bee-keeping an extra; have few appliances for putting hives together, and devote their attention to the production of comb honey exclusively. R. N. LEARNED.
Newton, N. J.

PLEASED.

Editor Gleanings:—I must acknowledge that you are the most prompt and reliable dealer I have tried as yet. I have been doing business with you in father's name, C. C. Bartlett. The goods have all got here in good shape; the mandrel and saws sent last winter are doing the best of work. I think GLEANINGS a fine paper, and the A B C book is now a superb volume, of which you may well be proud; and didn't you hit it, though, when you improved the Clark smoker? I wish you success.

Our honey season has been fair here. The bees swarmed to Christmas. Our main dependence is alfalfa. We have had no rain this summer, but were favored with snow last winter, so we have done very well. BART BARTLETT.

Vernal, Utah, Aug. 26, 1889.

TRAVELS AND THE HOME TALKS.

I have not yet received my GLEANINGS for July 15, but I have received the one for August 1. Thinking it must be lost I thought I would ask you to replace it, as I should not like to miss the first part of your trip to Wisconsin. I may say I most thoroughly admire your Home talks, as they seem to breathe such a Christian spirit. I believe I myself have been quickened to self-examination by your practical every-day life sort of expositions on our Savior's teachings. I myself belong to the blessed Master, whom I try to serve in the Sunday-school, the pulpit, and by the every-day life of one who tries to love his neighbors.

In regard to bees, blacks are the best here, all things considered. Imported Italians are no good in the north. My bees, 28 colonies, are working now on heather, after doing well on clover. I have the Scotch hills here in sight on the north, the Cumberland tells, with Skiddaw in full sight, on the south. J. STORMONT, JR.

Kirkbride, Cumberland, England, Aug. 21, 1889.

"THY WORD IS A LAMP," ETC.

Wouldn't it save some trouble if the editor of GLEANINGS carried a small "pocket-lamp" with him on his travels?

[The above comes on a postal card, written in a feminine hand, but no name was signed. To be sure, you are right, my good friend, and I have wondered that somebody did not take this matter up sooner. The reason why I did not have a Bible in my pocket was that I started out, as I usually do, with the expectation of going across the country with horse and buggy, and a good many times on foot; and I have learned by experience that every thing that can be dispensed with is a hindrance; therefore I did not carry even a Bible, supposing that, as a matter of course, I could readily lay my hand upon one anywhere; and I was not once disappointed, except in that great hotel. When I started away my wife brought me my Sunday-school quarterly; but I told her it would cumber my pockets, and I thought that I should be able to find one of some kind or other, wherever I was stopping. Another thing, I like to get hold of a Bible where I stop, and see how much it is used. I like to see a soiled, well-worn Bible. If it has a little beeswax and propolis on the lids, I do not feel troubled at all. I had decided, however, before your friendly suggestion came, to be provided with a "pocket-lamp," and one has already been laid aside, with a small copy of Gospel Hymns, to be ready for the next start off. Now, good friend, had you given me your name, possibly I might have called on you and asked for your Bible.]

HONEY COLUMN.

CITY MARKETS.

BOSTON.—Honey.—Honey is moving fairly well from 16 to 17c, with occasionally an extra fancy lot at 18c. Some large retail dealers in our city secured quite a quantity of white honey, averaging about 13 or 14 ounces to the comb, and are selling it at 15c per comb. This has tended to demoralize our other retailers, as they want to compete, as the large retailers have filled their windows with the honey, and marked it very prominently. Two-pound combs a little scarce, selling for 16 or 17c. Extracted, 8@9c. No beeswax on hand.

Oct. 10. BLAKE & RIPLEY,
Boston, Mass.

COLUMBUS.—Honey.—Arrivals of honey have been liberal. Owing to large shipments of western honey, bought there at 11c, being placed on the market, the price has been lowered to 15c, at which figure we had to sell a good part of our consignments, to meet competition. Large quantities still on hand, and the outlook is for still lower prices. No sale whatever for dark honey.

Oct. 10. EARLE CLICKENGER,
Columbus, Ohio.

CINCINNATI.—Honey.—There is a quiet but steady demand for choice comb honey, at 15@16c in a jobbing way; dark is of slow sale, at 10@12c. Demand from manufacturers is fair for extracted honey, and it is good for best qualities for table use.—Beeswax is in good demand, at 20@22c for good to choice yellow on arrival.

Oct. 12. CHAS. F. MUTH & SON,
Cincinnati, Ohio.

CHICAGO.—Honey.—Honey is selling with more freedom this month at the following range of prices: Choice white comb in pound sections, 13c; crooked or stained combs, 10@12; dark, in comb, 9@10; extracted, white, in kegs or cans, 7; in bbls., 6½@7; dark, 6. Beeswax, 25c.

Oct. 9. R. A. BURNETT,
161 So. Water St., Chicago, Ill.

NEW YORK.—Honey.—Honey is in excellent demand. We quote: Fancy white, 1-lb. sections, 15@16c; 2-lbs., 13@14; fair white, 1-lb., 13@14; 2 lbs., 11@12; buckwheat, 1 lb., 10@11; 2 lbs., 9½@10. Extracted, basswood and white clover, 8c; orange blossom, 8½; buckwheat, 6; California, 7½; Southern, 7½c per gal.

Oct. 11. HILDRETH BROS. & SEGELKEN,
New York.

ALBANY.—Honey.—Market some easier, but demand good, and any attractive desirable style comb sell well. Are short of small comb buckwheat honey. Clover, 15@16c; mixed, 13@14; buckwheat, 12@13. Extracted, buckwheat, 6; clover, 7½@8.

Oct. 11. H. R. WRIGHT,
Albany, N. Y.

DETROIT.—Honey.—Best white, in one-pound sections, 14@15c. Sales slow; supply not large. Extracted, 8@9.—Beeswax, 23@24.

Oct. 11. M. H. HUNT,
Bell Branch, Mich.

ST. LOUIS.—Honey.—No change in market, though firmer. Demand fair.—Beeswax, prime, 22c.

Oct. 11. D. G. TUTT GRO. CO.,
St. Louis, Mo.

KANSAS CITY.—Honey.—The receipts are very light. Demand increasing. We quote: 1 lb. comb, white, 13@14c; dark, 10@12; 2 lb., white, 12@13; dark, 10@12. Extracted, white, 7@8; dark, 6.—Beeswax, none in market.

Oct. 12. CLEMONS, CLOON & CO.,
Kansas City, Mo.

PHILADELPHIA.—Honey.—Honey in 1-lb. sections (No. 1) is in good demand. Quite a number of inquiries for same. Yellow beeswax is wanted at 23c. Good outlet for both.

Oct. 9. CHAS. E. SHOEMAKER,
44 So. Water St., Philadelphia, Pa.

FOR SALE.—1000 lbs. white-clover honey, in 60-lb. tin cans. Will put on cans here at 8c per lb.

20-21d R. I. BARBER, Bloomington, Ill.

FOR SALE.—About 1000 lbs. buckwheat extracted honey, put up in kegs holding 150 to 160 lbs. each. I will take 6c per lb. f. o. b., kegs thrown in. Will take beeswax in exchange.

J. I. PARENT, Birchton, Saratoga Co., N. Y.

FOR SALE.—I have a quantity of choice clover honey in scant 1-lb. sections, and 12-lb. cases, at 15c per lb. (100 lbs. or more). Also 60-lb. screw-cap cans of extracted clover honey at \$4.90 per can; 2 cans in 1 box, \$9.60. Safe arrival guaranteed by freight.

OLIVER FOSTER, Mt. Vernon, Linn Co., Iowa.
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Cheap TUMBLERS & MUGS

If you intend to put up any extracted honey in glass for the retail trade it will pay you to send a postal to the undersigned for price list of tumblers and mugs, also labels suitable for the same.

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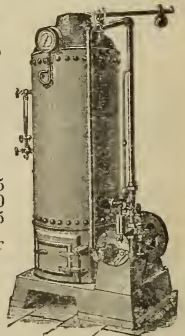
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122 WATER STREET, NEW YORK.



Vol. XVII.

OCT. 15, 1889.

No. 20.

TERMS: \$1.00 PER ANNUM, IN ADVANCE;
2 Copies for \$1.90; 3 for \$2.75; 5 for \$4.00;
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OUT-APIARIES, NO. XVII.

SPECIAL PLAN OF INCREASE FOR OUT-APIARIES.

VOU probably know better than I what plan of increase is best for you; but there is one way that can be used by means of out-apiaries that I think well to mention, and there may be times when you may think best to use it. One year, with plenty of empty combs I increased 12 colonies to 81, and took 1200 lbs. of extracted buckwheat honey. There is nothing specially new about the plan, only that you can easily make bees stay where you put them, if you take them from one apiary to another.

If you please I will take two colonies to work with, as the same thing can be done with a larger number. As soon as the season will warrant it, take the queen with one frame of brood and bees from No. 1; put it in an empty hive which we will call No. 3, and set No. 3 in place of No. 2, setting No. 2 in a new location. Take from No. 1 any frames not filled with brood, and exchange with No. 2 for frames of brood. No. 1 is now full of frames of brood, and has a full force of bees, and will at once go to work rearing queen-cells. You have your own plans for raising the best queen-cells, and can use them; and the day after the queen is taken away from No. 1, or as soon thereafter as convenient, insert in each frame of No. 1 a queen-cell. If you have no better way, I think you will find that No. 1, if you let it entirely alone, will raise some very good queen-cells; and about nine days after you have taken the queen away, go to the hive and cut out a good cell from a frame which has more than one cell, and insert it in a frame which has none, so that each of the frames shall have a cell. It is not necessary to destroy any of the cells. If there should be several on one comb it will do no harm. If the cells are inserted in the morning, you will probably find them

fastened in all right in the evening; but if any fail you must insert others. Fasten the frames if necessary. Next day take the hive to the out-apiary, making sure that the bees have abundant ventilation. When you get to the out-apiary, smoke the bees so that they will not immediately take flight, and put each frame, with its queen-cell and bees, into an empty hive, thus making a nucleus of each frame, giving each an empty comb. You thus see that each nucleus has its equal share of bees of all ages, and I don't know of any way in which you can thus evenly divide them without taking to another apiary.

In two weeks from the time No. 2 was moved, it will be ready to be operated upon the same as No. 1. Put its queen in a new hive, to be called No. 4, and put No. 4 in place of No. 3. No. 2 can then be taken to the out-apiary, as also No. 3 and No. 4. If none of the young queens have failed, we have as many new colonies as we had frames with queen-cells; and if the hives are 8-frame hives, there will be nine colonies for each one we started with. We are not likely, however, to succeed so well as this, and very likely some of the frames taken in No. 2 will need to be given to some of the first nuclei that failed to secure laying-queens. If the increase is five or six fold, it will be doing pretty well. The first colonies formed will become strong enough to spare some frames of brood, which will be needed to build up those started two weeks later. Then if any of them become crowded with honey, the extractor can be used to give the queen more room.

You will see that this is a good way to form a new apiary, for you are relieving the home apiary at the time of greatest increase of bees; and if you are anxious for increase, it is at least a good way. You might thus take 12 or 15 colonies to a new spot where there was good pasturage, especially fall pasturage, and allow them to build up at their

pleasure with very little attention on your part. If you had no empty combs, of course you could not do so well with empty frames or frames of foundation. C. C. MILLER.

Marengo, Ill.

I know the above will work, because I have done pretty much the same thing, only I did not have any out-apiary. Of course, an out-apiary would prevent all trouble from going back to the old colony, and you can at any time put bees or frames of brood, covered with bees, wherever you like, and they will stay right there.

VARIOUS MATTERS.

CRATING HONEY SO AS TO HAVE EACH CRATE WEIGH AN EVEN NUMBER OF POUNDS.

VEARS ago, when I first began to put up honey for market, I paid no attention to having the amount in each crate weigh an even number of pounds, but I put an even number of boxes in each crate, and in weighing them I marked each crate by the quarter pound. That is, if a crate weighed 30 lbs. 3 oz. it was marked $30\frac{3}{4}$ lbs.; and if it weighed 32 lbs. and 6 oz. it was marked $32\frac{1}{2}$, thus making the $\frac{1}{4}$ the nearest to the one which it weighed. I followed this plan for several years, when I saw some labels advertised, to paste on each crate, which gave the weight of the gross, tare, and net, in ounces. These seemed to me to be handy, so I sent and procured some of them, using them the next year. In sending in returns that year, not a single commission merchant said any thing about the ounces, except to grumble about the way I had marked the honey, and advised me to make my crates in the future weigh an even number of pounds, if I would obtain the best prices for my honey, and save them much annoyance and vexation. The next year found me making each crate weigh an even number of pounds, which thing I have kept up ever since, and in no single instance have I had returns made for a pound less than I shipped. As long as glass was used on each section or box, the matter was very simple; for all I had to do was to sort out the thin glass into piles of the right number for a crate, and the thick ones in the same way, till I had the number of piles that I would have crates of honey. These piles were now weighed, and a label put on each one, telling what it weighed, so that, when the sections of honey were brought out for each crate, and placed on the scales, the pile of glass was taken which would make the whole weigh an even number of pounds when the glass was placed on the honey. By adding this to the tare of the crate I had the gross weight, or just what the crate weighed when it was all ready for market. Later on, when it was not desirable to glass the honey, I sorted the pile of honey all over, placing all the lighter sections in one pile, all of the medium in another, and all those that were extra well filled or the heavy ones in the third. I would now take all the sections for a crate from the medium pile, which would contain the larger bulk of the honey; then if they did not weigh an even number of pounds I would exchange some of these medium sections for either the light or the heavy ones, as the circumstances might require, till the right amount was secured. I know this is a little work, but I have been satisfied that it

well paid me for so doing. Having just crated my honey for market, and thinking that I had never given this item before, led me to do so now. Try it, brother and sister bee-keepers, if you have not already done so, and see if you do not think this a good way.

NON-SWARMERS.

I see by page 733 of GLEANINGS for Sept. 15th, that the editor thinks that the plan I gave to prevent swarming would be the same as "hiving the new swarm and setting it on top of the old one, then in a few days destroying the queen-cells below and shaking the bees and queen in front of the lower one." Not so; as, in this latter case, the bees and queen are on the brood which they had before they swarmed; while in the plan I gave, the bees below would be building comb in the lower hive the same as would any swarm hived in an empty hive, while the brood above would be hatching (with few bees to cover it), and coming down below, so that the strength of the colony would be kept at the highest pitch all through the honey harvest, while during the first 21 days the queen would have all the cells built by the bees to occupy with eggs. I think all will see that the two plans are very different; the first having an uncertain element in it, while the latter places them in that certain condition generally enjoyed by all new swarms during the first 25 days after they are hived.

CUTTING OPEN QUEEN-CELLS TO SEE WHEN THEY WILL HATCH.

On page 754 of same number of GLEANINGS are found some of the points of merit the queen-cell protectors possess; but there is one thing not mentioned there which has been of some service to me, which I believe has never been mentioned. All remember how, in former years, they have been grieved when obliged to spoil one of two nice queen-cells which were built so near together that they could not be separated without cutting into one of them so but that the bees would tear it down and drag out the immature queen. Well, I was not long in finding out that a queen would hatch just as perfectly from a cell having one side gone, if the same was placed in a cell-protector, as she would had the cell been whole, for I have had scores of them hatch perfect queens from such mutilated cells. After finding this out it occurred to me that, if I did not know just when a queen would hatch from a given cell, all I had to do was to remove it from the protector (or do the same before it was put in) and open the cell at the side near the base, look at the immature queen, and put the cell back in again. From curiosity and for experiment I have many times opened a cell to that extent that I could turn the queen out in my hand, look her all over and place her back again; and where care was used I have never known one to fail of hatching a perfect queen afterward. After having looked inside of a queen-cell several times, or turned the embryo queen out in your hands, any one can tell almost to within a fourth of a day when they will hatch. This gives quite an advantage over the past, for many times we have waited for days for the hatching of a cell which finally never hatched at all, on account of the larva dying from some cause or other. G. M. DOOLITTLE.

Borodino, N. Y., Oct. 7, 1889.

I think, friend D., somebody has mentioned asserting the sections so that each case contains an even number of pounds. I

think each careful bee-keeper will find that it will pay him to do so. It certainly does not pay to leave things at loose ends. Honey is frequently sent us, without the shipper knowing either the gross or tare, trusting all to our honesty. I do not like this way of doing. A great many times we do not care to empty packages of extracted honey, and the weight of the barrel or keg is taken from the shipper, and accepted right along, until it comes to be retailed out.—Years ago I discovered that, during very warm weather, queens, when nearly ready to hatch, would mature just as well out of the cell as in; and I, too, have tumbled them out of the cell into my hand, and put them back again, and had them make nice queens. With the lamp nursery I have had them develop with no cell at all; but I never succeeded with one until it was so near hatching that the legs and wings were pretty fully developed.

ZINC HONEY-BOARDS.

THE VARIOUS USES OF THE METAL IN BEE-KEEPING.

THE invention of the queen-excluding honey-board marks an era in bee-keeping. Popular and useful as these have proved before, we are just learning some of their most important uses, and their possibilities are probably by no means exhausted.

By their use the queen is kept out of the supers, which is of the greatest advantage in extracting. In comb-honey production they are not so necessary, though even here they are very useful, and in some cases indispensable. In dividing, forming nuclei, and selling bees by the pound, it is a great advantage to be able to take bees from a hive without the necessity of hunting up the queen. Queen and drone traps serve a very useful purpose in preventing the loss of swarms and the flight of undesirable drones, though on account of their expense and some other objections they are not in very general use.

A queen-excluding honey-board at the bottom of the hive is much superior for temporary use. To adapt it to continued use, some way of disposing of the drones is necessary. Who will invent an attachment that will lead the drones into a chamber by themselves, from which they can readily be removed, and which will not make it necessary to cut holes in the hive or bottom-board, and will leave the queen-excluding board uninjured for its ordinary use?

Perhaps this is too much to expect, and we shall probably have to combine the drone-trap with the honey-board. Friend Heddon seems to have faith in an attachment to the side of the hive, but has not made the details public. I know that a hole bored through the side of the hive, covered with a small box having a hole covered with a wire-cloth cone on one side, and queen-excluding zinc on the other, answers very well, but I do not like to bore holes in my hives or make a drone-trap a permanent feature in all of them.

RAISING QUEENS ABOVE PERFORATED METAL.

A great deal of experimenting has no doubt been done this season with the new methods of having queen-cells built and queens fertilized above perforated metal. So far as my experience goes, it is

easy to get cells built while there is a queen in full vigor below, though these cells are by no means of the first quality, except under favorable conditions. I have had no success in getting queens fertilized in this way, though I have no doubt that, during the proper season, it would work well. Steady feeding when honey is not coming in freely will probably be necessary to insure success with either plan.

I have had some little trouble this season from the queen going through the perforated metal. This was a lot bought of you two years ago. It seemed as though any queen could go through it whenever she really wanted to; and any strong inducement, such as frames of brood, would be almost certain to bring her through, and I have known queens to go back and forth through it every three or four days. This same zinc, though, almost invariably kept queens out of extracting supers.

I have known some to argue that there was not enough passageway through the break-joint queen-excluding board. Let us see. If I have measured rightly, each perforation has an area of $\frac{3}{16}$ of an inch. The combined area, then, of the holes in a break-joint queen-excluder for an eight-frame hive would be 21.06 sq. in., equal to 27 holes an inch in diameter. The all-zinc break-joint boards for eight-frame hives have, as the combined area of their perforations, 36.85 sq. in., equal to 47 one-inch holes. Of course, some of this area is in corners, and not available for passage; but allowing for this, there is much more passageway than used to be considered abundant with the old-style honey-boards and boxes.

PLAIN SHEETS OF PERFORATED ZINC IN THE BROOD-NEST NOT RECOMMENDED.

The plan of laying a plain sheet of perforated zinc directly on top of the frames does not work well, as usually but a small proportion of the holes is left available for passage. All-zinc honey-boards are not well adapted to use on new hives, as they will sag by their own weight, no matter how straight they may be at first, nor how well nailed to the wood binding. When used on old hives, though, where the zinc is supported in the center by brace-combs, they answer excellently. For the same reason, these boards, when made up, should not be piled up flat, but should be stood on edge. It seems strange that a metal, apparently as firm as zinc is, should thus stretch and sag, but it is a fact.

Dayton, Ill., Aug. 29, 1889.

J. A. GREEN.

THIS SEASON'S OBSERVATIONS.

THE WEATHER, ETC.

THIS year was a favorable one for bees. Golden willow began blooming April 15th, and in a few days the hives were all well filled. We had but little rain from November till the middle of May; consequently the spring was extremely dry. But for all that, bees made a good living through fruit-bloom and buckeye. Locust opened up with fine prospects, but it then began raining, and rained for four weeks. Poplar bloomed profusely at this time, but the weather was too rainy for the bees to do much. Finally it cleared up, and white clover began blooming, though much later than usual, on account of the early drought. Then the bees began to swarm, and kept swarming until July 4. We increased from 20 to 40, doubling up many of the new swarms. Basswood produced but little honey. White and sweet clovers did well.

YOUNG SWARMS ROBBING THE PARENT HIVE.

June 2, we had a second swarm that was hived on frames containing some comb. After a little while I noticed an unusual number of bees going in and out of both the old and new stands. The next day I examined the new stand, and found the combs half built, and completely full of honey. The young swarm had robbed the parent hive of most of its honey. I am confident that they robbed it, for on the evening of the day that the swarm came out it was pretty cool, and not a bee was moving about any hive except those two. I got some flour and sprinkled on the bees coming out of the old hive, and found them all going into the new swarm. We have had several cases of this kind, and right in the midst of a good honey-flow. The parent hive never offers any resistance. But no harm is ever done by this kind of robbing. They never rob except the first day after coming out. I have seen them robbing quite lively late in the evening, and next morning not a bee would go back. One hive is robbed a little every year in this way by its first swarm.

DRONE ASSEMBLIES.

I am inclined to think that drones do not go very far to congregate. This year I heard the loud roaring of drones high up in the air in several places in our locality. Some of the assemblies were not more than half a mile apart.

RED CLOVER.

This year the second blooming of red clover produced honey quite freely. The blossoms were short, and the bees could easily reach the honey. During the drought, when the ground was extremely dry and the air very hot, the bees gathered honey in large quantities from it; and at the present date, Sept. 16, they are still working hard. The brood-chambers are very full of honey; in fact, brood is to a great extent crowded.

HONEY-DEW.

About the 10th of August, honey-dew began to appear on the maple-trees. It came in small quantities at first, but increased each morning for about a week. After that about the same amount fell each night until Sept. 6, when it suddenly ceased. The bees worked on it from daylight until about 10 o'clock. At the end of that time it disappeared, leaving stains on the leaves where the drops had been. It appeared more on warm nights, when there was lots of dew, and lasted longer on days that were cloudy. It always appeared on the upper side of the leaves, never on the under. It came in drops the size of small raindrops; and while some leaves would be covered with it, others would have but little or none. The top branches of the trees produced a great deal more than the lower ones. Some trees had three or four times as much honey-dew on them as others. It had a very distinct flavor of maple syrup about it, and when the sun shone on it a little while, it became thick like molasses. I have seen drops on some leaves, large enough for three or four loads for a bee. On some mornings, when it fell profusely, it could be found on the grass, weeds, and small bushes under the trees. I have seen the small maple sprouts (that just came up last spring, and as yet having but two leaves), distant from any other tree, and yet its two little leaves would be covered with honey-dew. I am confident that this honey-dew does not fall as the dew of the night, but that it is a secretion of the leaves, and that it comes from the limbs and body

of the tree, and is secreted by the leaves; for lately, in cutting up live sugar-tree limbs I noticed a liquid oozing out of the wood close to the bark; and in tasting it I found it to be sweet, having a taste similar to that of honey-dew. I also saw bees flying around the piles of freshly cut wood. When a freshly cut log was left in the sun a while this sap would ooze out between the bark and the wood, and form a bitter-sweet sticky gum. This is something I never noticed before. CHAS. L. GREENFIELD.

Somerville, O., Sept. 16, 1889.

Young swarms robbing the parent hive has been before mentioned. Like yourself, I have been obliged to decide that drones do congregate in a good many places, especially in the vicinity of large apiaries. Your remarks in regard to honey-dew on the maple seem to indicate that it may be a secretion of the plant. Friend France mentioned, while I was there, that one season he saw the bees working strong on the leaves of corn, right where they are united to the stalk. Selecting a hive where they seemed busiest he put an empty comb in the center of the brood-nest. In a day or two it was full, and he threw out the honey with the extractor, put it on the table, and asked the boys to decide what kind of honey it was. One of them replied promptly that he could not tell, but it tasted exactly like the juice from chewing a green cornstalk. This honey was a saccharine secretion directly from the corn—no aphides about it. I have seen it sufficient to keep the bees busy a while in the morning. Now, I think it is possible that maple may, under some circumstances, secrete a sweetish substance in the same way.

AN AVERAGE CROP.

FRANK M'NAY REPLIES TO E. FRANCE.

NOTICE on page 738 of GLEANINGS for Sept. 15, that E. France criticises the answers given by some of the respondents in regard to the average crop of honey. He is mistaken in supposing that the honey season opens and closes at the same date in all locations, for I notice that he now reports the same as he did on Aug. 3d, while I at that time considered my crop about half gathered; and as I had taken 20,000 pounds from 350 colonies during the first half of our season, I reported it an average crop *so far* (see question d, Statistics). I now report 26,600 pounds for August and September, making a total of 46,600 pounds for the season, of which 3050 is in one-pound sections, from 65 colonies, and 43,550 pounds extracted from 285 colonies. My bees are in six apiaries, from 35 to 75 colonies in each, located from $\frac{1}{4}$ to 5 miles from basswood; and as it is often asked how far bees may be located from basswood or other forage, and work to advantage, I have kept an accurate record of dates of extracting in each apiary, showing amount taken, distance to forage, etc.; and if you desire I will send you a tabulated record of the season's work. Our work was done with Bingham smokers and knives, and five Novice extractors.

Mauston, Wis., Oct. 1, 1889.

FRANK M'NAY.

Let us have the tabulated record, friend M. Your point with respect to the statistics is well taken.

WEIGHT OF BEES.

PROF. COOK REVIEWS THE SUBJECT.

I HAVE felt much interested in this matter of the weight of bees. I find in Keys' old work, p. 92, the following:

WEIGHT OF BEES.

100 drones.....	1 oz.
293 workers.....	1 oz.
4,640 workers.....	1 lb.
915 workers.....	3½ oz.
1,830 workers, a pint, or 6 oz. and 5 drs.	
3,660 workers, a quart, or 12 oz. and 10 drs.	
29,250 workers, a peck, or 6 lbs. 5 oz. and 6 drs.	

Keys adds:—"This statement is made on an average; for they will not prove twice exactly alike, because of their different degrees of fullness, etc."

I asked one of our students, Mr. John W. White, of Lancaster, Wis., to weigh bees, and see how ours agreed with those of Keys, and with those reported by you in GLEANINGS. Mr. White gave his paper before our Natural-History Society last evening. Like Keys, Mr. White found the variation large. He also found that bees a short time dead weighed less than those just killed. I have found it necessary to kill bees, when weighing, as the motion of their wings will often make a large difference in results. Our bees seem heavier than either those of Keys or those at Medina. Let me say, that our weighings are all done on scales so delicate that they will almost weigh a thought or sigh. Mr. White weighed seven lots of ten each. These bees had been long fasting, and were just beginning to die of starvation. The average was 4106 to the lb. While these bees were all near the starvation limit, yet there was considerable variation in weight. Mr. White chloroformed these bees. After they recovered from the stupor, he fed ten bees all they would take, and then weighed them. These weighed 15 milligrams per bee more than the others, or 3626 bees to the lb. The results of Mr. White's weights were a surprise to me, and so I thought I would verify their accuracy. I weighed 20 bees that were caught from the hives. They were then carried in my pocket for two or three hours in a cage while walking about. These bees weighed 108 milligrams per bee, or at the rate of 4222 to the pound. Another lot of the same number, taken after they had sipped all that they would, were chloroformed, and weighed at once. These weighed 123 milligrams per bee, or at the rate of 3781 to the pound. So, friend Root, I think your old average, 4000 bees to the pound, is more nearly correct for our bees than is your more recent estimate. I feel very certain that our bees will average 4000 to the pound; and I think that, when full fed, they will hardly reach more than 3330. You will note that, when starved, they reach only 4225 to the pound. Our bees are a cross between the Syrian and Carniolan. There may be a trace of Italian and German blood, and doubtless is. I had always thought that the Syrian race seemed large, and visitors often say, "Your bees seem very large;" yet I had not supposed there could be so much difference. Of what race were the bees you weighed?

Agricultural College, Mich.

A. J. COOK.

The account of your weighings is very interesting, friend Cook. Your figures are considerably lower than those we report in GLEANINGS for August 1, page 643. If we were both accurate in our weighings, then there certainly must be a difference in the

size of the bees. But this, it seems to us, ought not to account for *all* the difference. Although your scales are probably exceedingly sensitive, yet it seems to us there must be some little chance for variation, because friend White weighed only *ten* bees each time; and from this as a basis he figured the number in a pound. We have some scales here at the Home of the Honey-Bees that are sensitive enough to show a variation when a bit of paper is thrown upon the platform. Now, instead of taking ten bees we weighed a thousand, and then calculated the number in a pound, the thousand bees having been counted by a careful man. Now, do you feel sure that your scales, however delicate they may be, would always record the exact weight of *only ten* bees? The bees we weighed were Italians. They had been dead but a few hours, and had but a little honey in their honey-sacs. You say the bees you weighed were a cross between Carniolan and Syrian. The Carniolans certainly do *look* larger than Italians; and according to Mr. Cheshire's measurements they are larger. We have seen Syrians that appeared larger than Italians; yet to us most of them seem smaller. Would it be too much trouble for Mr. White to weigh some pure Italians, and count out, say, a hundred, and weigh them? We will send him some in a mailing-cage. Perhaps the difference in the size of bees will account for the difference in our results.

MANUM IN THE APIARY WITH HIS MEN.

HORSES IN NIGHT-CAPS AND NIGHT-GOWNS.

"COTT, have you a load of honey ready for me to take home?"

"Yes, sir; two of them."

"Good! the more the better. I see the bees are not doing very much to-day. I think basswood is about past, as there seem to be a good many bees around the door of the honey-house. I will back the wagon up to the door, and you may come and help me cover up the horses."

"There, take this thin cotton hood and cover the old horse's head with it while I do the same by the colt. See how the old horse holds his head down; he knows what it all means. Yes, he knows as well as I do when we are near an apiary. He has had experience with strings, hence he is always willing to have his head covered. There, now we will throw these blankets (made of same material) over their bodies, and tie them in front to protect the breast. There, you see they are well protected; and as these covers go down to their knees, the bees do not hang around the horses when thus covered. Formerly we used only our coats to throw over the horses' heads. That answered very well, as that caused the horses to keep quiet. Although our horses were never stung when only the coats were used, yet I was always afraid they would be; and as the coats had to be removed before starting with a load, they were then liable to be stung before getting out of range of the bees. But with these blankets it is different, as we can drive all the way home with them if we wish; but we usually remove them half a mile away from the yards. These

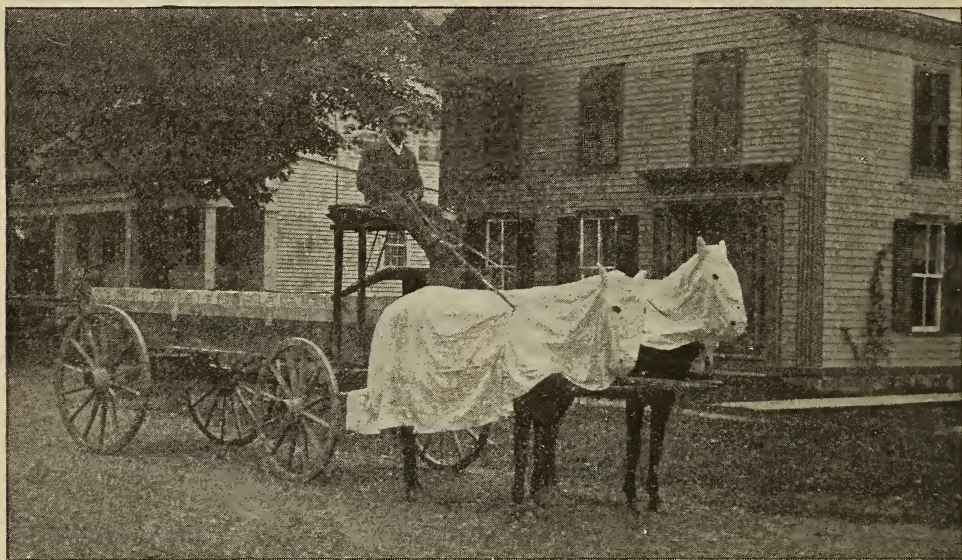
blankets, or protectors, being made in two parts, are quickly put on or removed, without being obliged to draw the lines through them, as one part goes over the lines and the other under. As Fred usually hauls all the honey, and as he leaves his yard tomorrow for that purpose, I am going to take a photograph of him with a load of honey, just as he arrives home with it, and send it to Mr. Root, as he may suggest some improvement.

"I will now get into the wagon, and you may hand me the clamps of honey just as fast as you can handle them; because, as soon as the bees scent the honey they will become altogether too familiar, therefore I want to get loaded as soon as possible, and be off. You can see this wagon-box was made expressly for this business. We can put in 32 clamps on the bottom for one tier, and 5 tiers will make 160 clamps, and 16 sections to the clamp gives us 2560 sections, making a little over a ton of

how to take them off and get the bees out quickly, I have left them all on that were on at that time. Why do you leave them on three or four days after the bees have stopped getting honey?"

"It is because there are always some sections that are not finished up at the time basswood has gone by; and as there is usually more or less unsealed honey in the brood-combs at that time, I leave the sections on a few days to give the bees time to carry it up and complete the sections. But in spite of all that, we shall have a lot of unfinished sections again this year. There, now I have got my smoker well to going, and we are ready to proceed. You say you have 117 colonies here that have clamps on them. All have two, and some three clamps; now, how long do you think it will take us to remove the clamps and get the bees out, and carry them into the honey-house?"

"Well, I do not suppose we can do it all to-day."



MANUM'S ARRANGEMENT TO PREVENT HORSES FROM BEING STUNG WHILE HAULING HONEY.

honey. Fred had this box made to suit his own notion, so that the clamps for shipping-crates just fit, both lengthwise and crosswise, which makes it very convenient for us. You may hand out two clamps more, which will just finish my load. Now, hand me that enamel-cloth covering to spread over the load to protect the sections from dust or rain, or the honey from the hot sun. There, now all is secure. You may now come out here; and as soon as I get seated, with reins in hand, you may remove the blankets and away I go. Good-by!

"How do you do, Will? I thought I would come to-day and assist you in removing all the clamps from off the hives. I believe it is four days since I was here and told you basswood had passed, is it not?"

"Yes, I think it is; and you were right, though I could not believe it; but the scale-hive has not gained a pound since that day; and as you told me not to take off any of the clamps for four or five days, and that you would come up and show me

"It is now 9 o'clock. Well, I think we can get every section in the honey-house by noon if we have good luck in getting the bees out of them. We will commence here at No. 1, and take them by course. You may look on while I go through this row, and then you can take a row yourself. There, now, watch me closely. I raise the cap, pull off the enamel cloth, smoke the bees a little to scare the queen down out of the sections, should she chance to be there; and while she may be doing so I go to the next hive and do by that as I have by No. 1, and so on through the row of 20 hives; and on my return to No. 1 I let down the caps to protect the uncovered sections from robber bees. I now raise the clamps from No. 1, set them on the ground edgewise, get the honey-board (brood-box cover) from under the stand, cover the brood-box, and take up the clamps and place them on the honey-board edgewise, and close the cap and go on to the next hive, and so on through the apiary. You again have the opportunity of enjoying the conven-

ience of having small or half-size clamps, for, as you see, if they were full size they could not rest on the brood-box and permit of the cap closing down tight. Why, I would not exchange these small clamps for full-sized clamps, if any one would give me the large ones free of charge; in fact, I should hardly know how to manage with them.

"There, now, we have the clamps all off, and there are 286 of them, which would be equal to 143 full sized clamps, and we have been an hour and 20 minutes in removing them. We will now go to No. 1 and see what progress the bees have made in getting out of the sections. Well, they are doing very well, but we can help them some by opening the caps, as the escapes are so small it is rather slow work; and especially where the sections are not full of honey they have more bees in them. We will now go right through and raise the caps. You may take one row and I one. There, just raise each cap; and as you do so the bees will fly out in all directions, and make for the entrance. Leave the caps up until you go through the row, as that will give the bees more time to fly out; on your return, close them, and take another row, and so on through the apiary; then we can commence at No. 1 and repeat the operation the second or third time if necessary.

"Now, as the bees are out of nearly all the clamps we will carry them in. We can carry two at a time, and even three, where there are three on the hive. If you find a clamp that the bees do not seem to leave, it will indicate that the queen is in it, or that there is brood in one or more of the sections. In either case the bees will not leave, and you will have to place the clamp on the ground at the entrance, and remove the sections one by one, and shake the bees out of them in front of the hive, that the queen and bees may run in. It is not often by this method that we get the queens into the sections. So far this season I have found but one queen in the sections, and have found only three sections with brood in them.

"It is now half-past eleven, and the honey is all in except the two last rows. These you can carry in at your leisure, after the bees are out of them; so, now, I will go home. You see it is a short job to remove the sections from 100 hives, and get the bees out, when one understands how to do it, and with the right kind of hive and fixtures. You may now, as soon as you can, scrape the propolis off the top and bottom of the sections as they are in the clamps, so that they will not stick together when piled one over the other. You will have but a few days longer to remain here at the apiary, as you will be needed at home to assist in preparing the honey for market." A. E. MANUM.

Bristol, Vermont.

Friend M., in behalf of our readers we tender you our sincere thanks for your very ingenious night-caps and night-gowns for the horses. The experience of a man who raises honey by the ton is certainly worth considering; and such appliances are usually the outcome of the wants and needs of a large business. Our readers will notice that you use the term "clamps" where we say "crates" for the box that holds the sections as they stand on the hive. I thought, a short time ago, that J. A. Green struck on the shortest method of getting the bees out of the boxes; but I do not know but

you are ahead of him. I should not have supposed it possible to take the honey out from 100 hives between 9 and 12 o'clock. Your process of inducing the bees to come out of the sections and go down into the hive is indeed novel. I suppose that this, too, was the result of much experiment and much experience. When I worked with Dr. Miller I thought his system and plan could hardly be improved upon; but with the vivid explanation you give us of your arrangement, perhaps you are ahead. It may be, however, that you will get along better on your plan, and he will get along better on his; but for all that, it is extremely helpful to have it explained so we can understand it, just how each large honey-producer goes about to do his work.

WHERE SHALL WE HOLD THE NEXT NATIONAL BEE-KEEPERS' CONVENTION?

SHALL IT BE CHANGED FROM BRANTFORD, ONTARIO, TO BUFFALO, N. Y.?

The *Canadian Bee Journal* for Sept. 18 contained an editorial touching upon a point that I had been thinking of for some time. It reads as follows:

While at Buffalo we lost no opportunity of inviting our American friends to be with us at the coming international convention, to be held at Brantford in December, and we were encouraged by many promises to be present. We hope that our Canadian bee keepers will not forget to be present, and give our visitors such a welcome as they deserve. By the way, would it not be mere justice to place the holding of the next convention at Buffalo? The bee-keepers there would like it, and it will give Canadians a good chance of again being present. Besides, the Eastern States are deserving of it in their turn. Think of it, and come prepared to do the matter justice, in the best interest of the association.

This set the ball rolling; and, of course, in view of the foregoing considerations I could not help giving it another boost by writing the following letter to Dr. Mason, president of the Association, which will explain itself:

Friend Mason:—The last leading editorial in the *Canadian Bee Journal* for Sept. 18th strikes upon a point that I have been thinking of for a long time. The reason the next international convention was located at Brantford was because its secretary lived there, and could see to all the necessary business; but now I am informed he has moved away, and has been away for some time. The publication of the *Canadian Honey-Producer* has also been discontinued. Now, the question comes up, What attraction or what reason is there for having the convention in a small town in Canada, with nothing particularly to call it there now? The population of Brantford is only 13,000, and it is but 70 miles from Buffalo by rail. Why wouldn't it be a good scheme to change the convention to Buffalo, on the border of the two countries, in a city of 250,000 population, and in the vicinity where some of the best bee-keepers in the world are located? We can surely get better rates of travel to Buffalo. Furthermore, there is a good live man by the name of O. L. Hershiser, with whom you are acquainted in that vicinity, and you may be sure he will leave no stone unturned to make the next international

a success so far as accommodations, rates of travel, etc., are concerned. Buffalo in the winter time is a place of great resort, on account of the Falls, and I am satisfied that a much larger attendance can be had by some outside attraction than by bees alone. At New Orleans there was the largest attendance at the international in its history; and the reason of it was the World's Exposition. We were interrupted a little, it is true, by those coming in and going out; but I would a great deal rather attend a convention where there is a large attendance with some interruptions than a small one-horse affair with an international name and no interruptions. Now, my better half and I, and, in fact, the whole of the Roots, want to see Niagara Falls in the winter. For the sake of the women, therefore, and for the sake of securing the presence of the New England and New York bee-keepers, exert your influence in favor of Buffalo, N. Y. The Canadians, according to the C. B. J., will be just as willing to attend. There is nothing at Brantford now to attract the convention, and there is no reason why it should be held there. I will write to Prof. Cook, and also to Mr. Newman, and the secretary, Mr. Holtermann. The latter, under existing circumstances, would, I think, just as soon have it at Buffalo as at Brantford. We changed our place of meeting last year, and why not change it now? Times and circumstances alter things very materially sometimes. Whatever you may think or say, remember that at Brantford there used to be a bee-journal and an editor of a bee-journal, and a secretary of the International Bee-keepers' Association. These attractions are now all gone. ERNEST R. ROOT.

Medina, Ohio, Sept. 24, 1889.

Hardly deeming it advisable yet to do any thing about it in print. I sent press copies of this letter to Prof. Cook, who originally proposed meeting at Brantford, and to the editor of the *American Bee Journal*, Mr. Newman. The following replies were received, all of which seconded the change. The first one is from the president, who writes as follows:

Friend Ernest:—Yes, I am in favor of a change of the place of meeting of the international convention, *provided* the Canucks so desire. Come to think about it, though, I don't think that it is any of their business, with the possible exception of Messrs. Jones and Holtermann. I believe they are the only members in Canada. But why not put it at Niagara Falls, on the Canadian side, then we should be right where we could all see the "beauty" without leaving the convention. I am willing to go anywhere my friends will allow; and if I am short in December, you'll not see me at the convention; but I *hope* to be there, and Mrs. Mason with me. A. B. MASON.

Auburndale, O., Oct. 1, 1889.]

I think I should still prefer Buffalo as the place of meeting, to Niagara Falls itself. Buffalo, besides being centrally located, is so near and accessible to the Falls that those who so desire can visit them *after* the date of the convention. If, on the other hand, it were held at the Falls, there would be more or less interruptions *during* the session. In other words; Buffalo would be just near enough to be an attraction, and yet sufficiently removed from the roar of the great cataract to avoid interruptions.

Prof. A. J. Cook writes in this manner:

Dear Friend:—I think your reasons are good. We all only wish the best interests of the society. If they would be best served by changing to Buffalo, as seems likely, then I say Buffalo. I see no objection unless the secretary or the Canadian beekeepers object. A. J. COOK.

Agricultural College, Mich., Sept. 30, 1889.

Brother Newman indorses it in this vigorous style:

Friend Root:—Yours is received, with press copy of letter to Dr. Mason, which I have read carefully. If the Canadians don't object seriously, I see no reason why the convention should not be at Buffalo. Our best convention was held at Detroit in 1885, on the border between the U. S. and Canada. The meeting at New Orleans was not one of the National Conventions. It was an *extra*, but it was good, and just as you say. Count me and the *American Bee Journal* in favor of Buffalo, and send me *advanced proofs* of matter for GLEANINGS about the change, and I will *second your motion*, and support it to the best of my ability. T. G. NEWMAN.

Chicago, Sept. 30, 1889.

Perhaps I should have sent a press copy to the secretary, R. F. Holtermann, now of Romney, Ontario, Can., but not then remembering his address it was overlooked until now. I feel quite sure he will indorse the change.

Now, then, you have the full facts before you. That we may ascertain the pleasure of the members of the Association, I suggest that those who favor the change, and also those who do not favor it, write directly to Thomas G. Newman & Son, No. 925 West Madison Street, Chicago Ill., recording their vote; and Messrs. Newman, after receiving them, can transmit them to the secretary of the society, who will act accordingly.

BEE-STINGS ARE ALWAYS A CURE FOR RHEUMATISM.

A GOOD TEST.

I SEE so many good writings in GLEANINGS that I can not begin to answer them; but as you said you want facts respecting bee-stings as a remedy for rheumatism, I will give my experience. I have handled bees for 32 years, and I have been troubled with rheumatism for 26 years, brought on by scarlet fever, and I have been stung I don't think I can guess how many times, and so I won't try to tell; but let me tell you one instance: This August a very large swarm of one-banded Italian black bees came out on a very hot afternoon, and clustered in the very top of a tall locust-tree. I climbed up, without any protection at all, and got almost in reach, with pocket-knife to cut the limb, and it split off with the weight of bees, and they scattered down the tree and down all over me, and up my shirt-sleeves, and up my trouser legs, and in my hair, and all commenced stinging. I came down that honey-locust in double quick. Rheumatism did not hurt me a bit for a few minutes; but when I got veil, gloves, and myself tied all around bee-proof, and smoker in one hand, rheumatism settled just as it was before; but a little kerosene took all the bee-stings out in a few minutes. But bee-stings are not as bad as mosqui-

toes on me. I have neighbors who get stung very often, and one sting on the face will swell the eyes almost shut and they still have rheumatism. The stings did help my rheumatism, though, until I got myself separated from the bees, but it is no better since than it was before.

BLUE HONEY; JAPANESE A BETTER HONEY-PLANT THAN SILVERHULL BUCKWHEAT.

Well, did you ever see blue honey? My bees gathered blue honey, I think honey-dew, off the green leaves. I saw the bees licking sweet dew in the morning on chestnut leaves. They all quit the buckwheat and went to licking the leaves. Japanese buckwheat is a little better than silverhull, as the blossoms are more in bunches, and don't dry out as quick as silverhull, and the bees work longer on the Japanese than on silverhull; but I don't think a bee gets a load on one any quicker than on the other; but the Japanese is the best buckwheat for the farmer to raise. It grows larger on poor soil, and stands up better on rich soil, and yields more per acre than any other grain in bulk. I don't think there is any more grain on a stalk than on a silverhull stalk; but Japanese grains are about four times as large as silverhull, and of course a bigger yield, and the stiff thick stalk on Japanese makes it more valuable for cutting and gathering.

SETH NELSON.

Wistar, Clinton Co., Pa., Sept. 8, 1889.

We should hardly hope that bee-stings would be a permanent remedy for rheumatism. If it answers in warding it off from season to season, we ought to be thankful.

THE CONE-CASE BEE-ESCAPE, AGAIN.

FRIEND GREEN PROPOSES A PLAN TO REDUCE THE LABOR OF EXTRACTING TO A MINIMUM.

WITH regard to the Reese bee-escape, I do not mean to say that it will invariably remove all the bees. Generally the super will be left entirely free of bees, but often there will be a few left—so few that they are not worth considering. I take the super into the honey-house, stand it on end on the floor, and in a few minutes all are gone. When there is any brood in the combs to be removed, I know of no way to get all the bees off except brushing, or the use of a very liberal amount of smoke. There should be no brood in comb honey, though, and perforated zinc will easily keep it out of extracting-combs. Just think how much easier and nicer this makes the production of extracted honey! No shaking or brushing of bees, with the attendant stinging and daubing! no brood to bother; and where there is no brood there is seldom pollen, so that the quality of the honey is not injured by either of these causes. Now, if I thought I could ripen the honey properly I would extract it before any of it was sealed, thus doing away with the uncapping. I would have one of your new-fangled extractors that would hold all the combs in one super and throw out all of the honey at one operation. Wouldn't that be getting down to business? In this way it would not be a difficult matter for one man to extract all the honey from quite a large apiary every day, if desirable, thus leaving the bees nothing to do but to gather nectar. Seriously, I have half a mind to try it.

I have corresponded with manufacturers of evaporators, but have not found any thing that seems to be what is wanted. It may be that honey would not be greatly injured by being evaporated in the common evaporator, such as is used in making maple syrup. Indeed, I think basswood honey might even be improved by it. White-clover honey is injured, and heart's-ease ruined, by boiling. I know there is a great deal of speculation in this, but I should like to see an apiary of, say, a hundred colonies run on this plan in a first-rate locality for basswood.

JAMES A. GREEN.

Dayton, Ill., Sept. 20, 1889.

CUCKOO-BEES.

PROF. COOK GIVES US SOME TRUTH THAT IS STRANGER THAN FICTION.

ON page 34 of my Bee-keeper's Guide I thus refer to these curious insects:

"Other bees—the numerous species of the genera *Nomada* and *Apathus* are the black sheep in the family *Apidæ*. These tramps, already referred to, like the English cuckoo, and American cow blackbird, steal in upon the unwary, and, though all unbidden, lay their eggs; in this way appropriating food and lodging for their own yet unborn. Thus these insect vagabonds impose upon the unsuspecting foster-mothers in these violated homes, and these same foster-mothers show by their tender care of the merciless intruders that they are miserably fooled; for they guard and care for infant bees which, with age, will in turn practice this same nefarious trickery. The *apathus* species steal into the nests of *bombus*; the *nomada* species, which are small bees, often beautifully ringed, into the nests of the small black *andrenæ*."

Now, Mr. Editor, I am wondering if I should not have said in the last sentence, the *apathus* species steal into the nests of *bombus*, and into the hives of our honey-bees. Several times this summer I have received letters from Indiana bee-keepers, complaining of the presence in their hives of black bees, often in considerable numbers. Several have written that the black bees were not honey-bees. I have written repeatedly for the bees, and now comes a box with two bees. I wish there had been ten or a dozen (or, better, 50), wrapped in cotton, so they could not have been injured; and the following letter from Mr. Perry Moore, Hortonsville, Indiana: "I send you by to-day's mail two insects that I found in a colony of bees. The bees are hybrids, and in good condition. These bees have not been without a good laying queen for more than a year. There are one hundred or more of these bees in this colony. Although I have kept bees for the past twelve years I never saw any thing like this before."

Now, Mr. Editor, this is interesting. I find this to be a species of *apathus*. It is about the size of a worker, but resembles more the bumble-bee. Like all bees of this kind—cuckoo-bees—there are no pollen-baskets. Its thieving habits make such organs unnecessary. If we, by hook or crook, get others to do our work, then we need no tools. Heretofore we had not supposed that these insect-thieves pilfered from our hive-bees; but now our suspicion is fully aroused. Note that Mr. Moore says that there are one hundred or so in the colony. Does this not look as if these bees were reared in

this hive—the brood being cared for by the honey-bees? This is very interesting practically, no less than scientifically. I have written to Mr. Moore to examine at once to see if these bees were being bred in the hive. There are two ways to find out. First, study the larvæ to see if some are different from the others. This might be a long, tedious, and difficult investigation. The other is to watch for the cuckoo-bees just as they come forth from the cells. Some such ought to be seen, and they would doubtless look much like young honey-bees, smaller and lighter colored than the older bees. I hope others will also be on the lookout for these bees. Very likely these cuckoo-bees will winter right in the hive with the other bees. To find out their habits in this respect will also be very interesting. I hope Mr. Moore and others will try to find out the truth in the matter. If I can get some of these bees I will try to see if I can introduce them here, that I may study their life-history.

Agricultural College, Mich.

A. J. Cook.

Well, well, old friend, you have indeed got hold of something, if it be true, that might well astonish the whole of us; but either you have not told us all, or else you have not considered all there is to it. Were those eggs surreptitiously placed in the worker-cells by a queen cuckoo-bee, or are the workers all queens? What enemy have we to fight—the single insect that eludes the sentinels, and lays some eggs in worker-cells, or a whole tribe of them? If the 100 or more are going to lay eggs, how long will they stay in the hive before they start out on their nefarious business? You suggest that they may stay over winter. Now, if they do, what then?

ROBBER-BEES.

AN EXPERIENCE ON A LARGE SCALE.

PREVIOUS to coming here to Cuba I had had comparatively little knowledge and little experience in this line of bee-keeping; but the past two summers have been spent in an almost constant contest with robber-bees; and possibly telling my experience may be a little help to some who, from any reason whatever, may be placed similarly to myself. Of course, the true remedy is never to handle bees so they will get started, which can always be done in our Northern States, and almost always in the South; but sometimes experiments are being made in a new country, as we are doing here, or a bad season occurs in California, such as did occur there a few years ago, when whole apiaries had to be fed to save them. In such instances the best way to control robbers is exactly what we want to know. Here where, partly from a mistaken idea and partly for experimental purposes, we are trying to keep 500 colonies in a field, which during four or five of the hottest months of the year, gives forage for not over 200 colonies, we have to practice wholesale feeding, and plenty of robber-bees is the natural result. Of course, the right way is to keep bees, here and elsewhere, so no wholesale feeding will be necessary, during ordinary seasons at least, and we now know how that can be done here in Cuba.

In June of last year I suddenly found that at least a quarter of our 430 colonies had less than a pound of honey to the colony, some of them not

over an ounce, while the other three quarters would average not over 3 lbs. each, with no arrangements for feeding on hand, or that could be procured in less than a month of time. Fortunately, for this purpose at least, our hives were of the fast-bottom-board type, and I could feed in the hives. About two-thirds of the colonies required from one to four feeds each during the summer. I had fed but a few hundred pounds of honey, when I saw that it would be impossible to feed honey that way; so we changed to sugar syrup as a food. The smell of this doesn't seem to excite the robbers so much as honey does. With this we managed to get through the season, although with great difficulty. It was the most disagreeable season's work I ever did with bees, except this summer's. Last spring we obtained 200 feeders, similar to the modified Miller feeders you make. This year we had to commence feeding by the middle of May, nearly a month earlier than last year, and have had to feed nearly three-fourths of our 500 colonies.

We have learned a number of things in connection with this work. Some of them are: 1. That what would be a very light task indeed, requiring almost no skill at all, to feed 100 or even 200 colonies, is an almost impossible task with 500 colonies. 2. That we must feed as few times as possible, therefore must feed as much at a time as the bees are certain to take up during the night. 3. That robbers are much worse around a hive which has feed left in the feeders. 4. That each time we feed, unless we wait longer between feeds than we could do, the robbers would be worse than the previous time, showing clearly how susceptible bees are to being educated, in one direction at least. 5. That honey fed in the bottom of hives attracts robbers much worse than if given in feeders on the top of combs. 6. That mild-flavored honey attracts robbers much less than does strong-flavored honey. There is no need of mentioning the old well-known facts about feeding after sundown, and about Italians protecting stores better than black bees do, etc.

I usually practice feeding from 20 to 30 colonies at a time, and give 5 or 6 pounds at a feed to each colony. The first three or four times feeding, no precautions whatever were needed—not even to contract the entrances. The next two or three times, contracting the entrances was sufficient; then it became necessary to entirely close the entrances of all the weaker colonies, which was done the last thing before retiring at night. The entrances were kept closed until after the first charge of the robbers was over in the morning, usually until nine or ten o'clock. Soon, this was not sufficient, and something else had to be done. I tried using wire-cloth covers on the hives, but that was a failure, just as you describe in your ABC book. I then obtained some strips of glass, 3 x 12 inches, and leaned them over the entrances. These were a material help, as the robbers had to travel several inches under the glass before reaching the hive entrances, thus giving the defenders a great advantage. But in time the robbers learned how to manage these. Wet grass over the entrances was of little account. About this time it looked as though I had two horns of a dilemma to choose between. One was, to allow a few score of colonies to die of starvation, or to feed and have them destroyed by robbers. Had the apiary been my own, I should have decreased the number of colonies at least a hundred last spring, instead of increasing that many, as we

did, or I should have divided what we had into two or more apiaries, thus entirely preventing this condition of things; but, whether fortunately or otherwise, time only will prove. I was, for the first time in my life, obliged to follow another's judgment of proper methods in the apiary, and to do the best I could.

The new revision of Langstroth's book helped us out of this trouble by its suggestion of the use of carbolic acid, which proved the most satisfactory of any thing I had tried, and I have so far not lost a single colony by starvation. It is used very dilute, less than a tablespoonful each of carbolic acid and glycerine in a 4-oz. bottle of water, sprayed as much as needed on a bunch of dried grass placed at the entrance to any hive robbers may be working at. It needs to be used carefully to prevent injury to the colony being robbed. By persistent watchfulness and care, and the use of every thing I could think of, I have succeeded in bringing the apiary intact through over four months of steady feeding; but it has been by far the most unpleasant work I have ever done with bees, and one I hope never to repeat.

O. O. POPPLETON.

Havana, Cuba, Sept. 14, 1889.

Thanks for the account of your experience. Some years, we are aware, are a great deal worse for robbers than others. Two years ago this summer, you will remember, perhaps, we stated in the department of Our Own Apiary that robbers were as bad as we had ever seen them, and that most of the well-known methods (to say nothing of prevention) proved a failure. At the time, we used a pane of glass. As you say, this had only a temporary effect, for the robbers soon learned the trick of going under the glass. We also used a weak solution of carbolic acid, the same being sprayed in front of the entrance, or wherever the robbers concentrated their attacks (see GLEANINGS for 1887, p. 671). For a while this seemed to work very successfully; but the strong scent of the solution seemed to disorganize the defenders of the home as well as the robbers, and in due time the latter got the advantage. They, too, got so hardened and defiant that they would go through thick and thin. We had some 300 colonies, and there was hardly a pound—yes, hardly an ounce, in their hives. The days were hot and dry, and we can appreciate somewhat your situation.

In addition to what Ernest has said in the above, I wish to add that I have had more or less experience in regard to every one of the six points you make. I wish especially to call attention to the fact that robbers will hang around a hive, and force an entrance, very much worse while there is feed in the feeders than they will after the feed has been taken down and placed in the combs. I became so well convinced of this that I was in the habit of deciding when the feed was all out of the feeder by the movements of the robbers in front of the hive. One explanation for it is this: That when bees have their attention all taken up with the contents of a large feeder they seem to forget to keep the usual sentinels around the entrance. When I fed a barrel of sugar to a single colony, in a few days they got so that they seemed to care very little whether

robbers got in or not. Honey had been poured into their hive day after day to such an extent that they could not believe but that it was plentiful everywhere. I, like yourself, soon determined that each colony must have no more than it would take up before daylight in the morning. I also discovered that basswood honey, with its strong aroma, was ever so much worse to set the apiary in a craze than any other kind. In fact, after they had once got a taste of strong basswood honey not fully ripened, during hot weather in August, it seemed as if they would bite through inch boards to get at it. They got under the door of the honey-house, found cracks between the siding, went down the chimney, and came up through the ventilator, just to get that much-coveted basswood honey. I have been where I saw just the two horns of the dilemma that you speak of; and at such a time, woe to the hive that is without queen or brood.

A LOUISIANA APIARY.

THE YUCCA GRANDEFLORA.

MAIL you to-day a photo of a grand flower now in bloom in a part of my bee-yard. It is the yucca grandeflora. It stands ten feet in the body, capped by this immense ball of white blossoms, each as large as a teacup, and at least 500 cups to the head. The cups have been filled with bees from the opening till the present time. My severe loss, a few years ago, in the apiary, from Paris green, retarded my work very much; but I am again catching up, and have to-day 111 stands of bees in splendid condition. At one time I became very much discouraged, fearing that, if the planters had to continue the use of Paris green year after year, I might as well go out of the business; but I believe now, seeing the result of last year's experience, that it is a rare thing for the bees to visit plants to which Paris green has been applied. Last year it was used on the cotton to exterminate the cotton-worm, in the same manner and time as the preceding year, on thousands of acres in our vicinity, and yet I lost no bees last year, while the year before I saved only 33 out of 118.

I have been living in our present locality only eight years. When we first came here it was a wilderness, a Louisiana swamp; to-day I have around me one of the nicest little orchards of apples, pears, figs, and plums, in the country. The pomegranates you can see to the left of the picture. To the right of the picture is a row of basswoods which I have with great difficulty induced to grow here, having to shade them till they were three years old. To GLEANINGS I owe most of my knowledge. I have been a regular subscriber since 1878. How many older ones have you on your list? I look forward to the coming of each number now as eagerly as I did the first that were published eleven years ago.

I have had my ups and downs, like every other bee-keeper that has lived, and my "bee fever" has never cooled for an instant; nor can I hear that shrill tattoo that sounds "a swarm out" without starting with all the excitement of the first stages of the disease. Outside of the profit (and at times

they have well repaid me) I love the study, and have taught it to my three boys, who are now old enough to do the work, almost, with me.

I have always used the Langstroth hive, on Mr. Winder's pattern, which takes the Simplicity frames.

One other item I should like to mention is my experience with the Chapman honey-plant. We were sent seed from the Agricultural Dept., Washington, last year, and planted it in April. They did not bloom till this spring, and it may be that there is so much more to gather honey from while they are blooming that the bees have neglected them entirely. I shall plant again, and try another season. We extracted 60 lbs. this morning from a hive that had already yielded 75 lbs. this spring.

Monroe, La., July 20, 1889. St. J. T. MOORE.

Your photo was received, and we should have been very glad to present it to our readers in the shape of an engraving; but some parts of the picture were so dim and out of focus that it would be impracticable to engrave it by our special process. You have given us a very good pen-picture, however.

HEADS OF GRAIN

FROM DIFFERENT FIELDS.

LARD-CANS; WILL THEY BE SUITABLE FOR HONEY?

Please inform me whether round tin cans, such as lard is shipped in (holding 50 lbs. of lard), would be suitable to put extracted honey in, to be left in the honey-house for three or four months. I can get these cans for about 20 cts. each. They are as good as new, having been used only once. Do you consider them heavy enough to hold honey?

AMOS G. ADDISON.

Huntington, Fla., Sept. 10, 1889.

Any kind of tin cans are suitable for honey; but be sure you have them cleansed so that there is not any lardy smell about them. If I am correct, such cases as you mention have been used quite extensively already. You can decide only by actual test as to whether they are strong enough. They will probably need to be crated, to prevent injury in shipping, and a round can is much more inconvenient to crate than a square one. This is the principal reason why we have adopted the square can instead of the round.

BEEES TOO NEAR THE HIGHWAY; SERIOUS RESULTS OF SUCH PROXIMITY.

We have had an occurrence in our county that is well calculated to set bee-keepers thinking. A bee-keeper has been keeping his bees very close to the highway, and a few days since they stung a horse to death, badly stung another one, and several people, thus causing considerable damage and annoyance. Now, there is considerable prejudice against our business, and we are not altogether blameless; for in looking over bee-yards we find a great many bees just as close to public roads as fences will allow, and are therefore a public nuisance, and dangerous as well. I hope GLEANINGS will give this matter attention, to the end that careless bee-keepers have their attention called to this matter, so that no more prejudice arise against our business.

Because we love our business is no reason to suppose our neighbor wishes to have his property damaged, or be stung himself. Move the bees back.

C. A. DEAN.

Auburn, Pa., Sept. 2, 1889.

GETTING PROPOLIS OFF FROM GLOVES.

Please tell your readers what will take propolis off rubber gloves, or how to get it off. I am sure they would like to know.

MRS. H. J. PROPER.

Franklin Corners, Pa., Sept. 19, 1889.

My good friend, we can not answer you from actual experience, for no one uses rubber gloves in our apiary, that I know of; and although we sell hundreds of dollars' worth of these gloves, it has always seemed to me that it was a mistaken notion that they were needed in handling bees. The solvent for propolis is benzine; but whether it will resolve the rubber also, can be ascertained by experiment alone.

BEE-STINGS A REMEDY FOR RHEUMATISM.

I commenced in 1887, with one stand, and now have 32. Although the season has been very poor, I have been able to get 600 lbs. extracted and 100 lbs. comb honey, most of it raspberry and white clover, so far this season. The fall flow has commenced now, and prospects are good. I think I shall be able to get more this fall than last spring. The greatest benefit received from the bees, which I hope you will give through GLEANINGS, was being cured of the rheumatism. I had the white swelling when 14 years old; and although it was cured I had been bothered ever since a great deal with rheumatism, until I commenced working with bees. I have not had a single hard spell since. I have felt several times as if I were going to have a spell; but a sting or two seemed to relieve it immediately.

C. E. LAYMAN.

Troutville Station, Va., Sept. 13, 1889.

BEE-STINGS NOT A REMEDY FOR RHEUMATISM.

I agree with Mrs. John Burr, of Braceville, Ill., that bee-stings are no relief for rheumatism. Five years ago, as I began bee-keeping I suffered from rheumatism about as badly as a man could, and I have it yet, although not so bad this summer; but last year I was disabled for six months. But as I began bee-keeping, I was told by several parties, "Now let the bees sting you as much as they have a mind to, for that will cure you." A rather bold remedy, is it not? Well, I confess I was stung enough for the entire season. My hands were swollen to double their natural size, and sometimes the face also; but it did not affect the rheumatism; but, strange as it is, since the first season, the bees may sting me ever so bad and it never swells in the least. I believe the reason for bee-stings and many other remedies recommended for rheumatism, is because it will sometimes leave a person all at once, in a change of weather or even a change of wind; then when the sufferer has been using something he is ready to say it cured him. I have been fooled many a time the same way, although I am not very apt to jump at conclusions. But I have many a time thought I had something that cured me, only to find, when the trouble returned, that it had no effect upon it at all.

JULIUS JOHANNSSEN.

Port Clinton, O., Sept. 9, 1889.

You make a good point, my friend, where you mention that rheumatism and like ail-

ments are almost constantly coming and going; and the fact that they often disappear very suddenly, without any apparent cause, should lead us to be slow in deciding that it was bee-stings or any sort of medicine that produced the result.

GREAT IS TRUTH, AND WILL PREVAIL.

I inclose a clipping from the *Farm, Field, and Stockman*, of Chicago, Sept. 28. I am happy to see that there are some editors that are ready to stand by the truth in this matter, instead of gathering up the slander that has been taking the rounds of the press; and I feel that it is our duty to express our thanks to all such, as much as it is our duty to express our disgust and indignation to all such as are ready to publish lies and slander concerning our honest and reputable industry.

Bluffton, Mo., Oct. 1, 1889.

S. E. MILLER.

The idea that comb honey is ever manufactured is as absurd as it is false, and has been refuted so many times that further denial seems superfluous, and yet we occasionally see a newspaper with an article on glucose and paraffine, and the American Encyclopedia contains a rehash of the same old slander. The fools aren't all dead yet.

The tide is changed. We have now good live substantial periodicals, outside of bee-journals, that are championing the cause of bee-keepers. In the name of bee-keepers we desire to thank the *Farm, Field, and Stockman*, and we hope they will continue to use their large influence in contradicting the manufactured-comb-honey nonsense. Let bee-keepers also follow up and refute every such slander upon our good people.

ANOTHER RED-CLOVER STRAIN.

The honey season in spring was short, but we had considerable clover honey. I think I must have a "red-clover" strain too. The progeny of my first queen (a leather-colored one, and the best I ever had), about 8 colonies of Italians and hybrids, went $3\frac{1}{2}$ miles to a 20-acre field, and these same bees have stored sweet honey the past 8 weeks, while the rest have worked on bitterweed. Since July, the sources have seemed to be peaches and bitterweed. Goldenrod and aster are now yielding some very nice honey. There has been some swarming, but they are to-day killing drones. I extracted last week from 5 to 7 frames per colony from my best strains, weighing as many pounds per frame, leaving lower story full.

Pontotoc, Miss.

C. P. COFFIN.

You have touched upon one valuable trait of the Italians. They are much more disposed to gather sweet honey, as you term it, than either blacks or hybrids; and I have seen this state of affairs so many times that I think it can not be a mistake. Now, did any one ever know blacks or hybrids to gather good honey while the Italians were working on an inferior quality from weeds?

A BOGUS HONEY-BOOK.

I will send you a new method of bee-keeping which I gave \$1 for, to learn something new; but I got sold.

NELSON HANER.

Cedar Creek, Wis., Aug. 8, 1889.

With the above comes a little pamphlet of 20 pages, copyrighted by Louis Craux Mudge (pronounced *Crow Much*, we presume), published in "Appleton," no State given, 1888. Now, some of you may insist that a book of

only 20 pages may be worth a dollar, after all. Perhaps it may be, but I have never seen such a one. They are usually made up about as this book is. We will take three paragraphs for a sample.

FOUNDATION COMB.—A great many people pay out money foolishly for foundation comb, when it can be made for the mere price of the wax and at home. I know full well the artificial cells are all remodeled, and a plain surface is the best for bees to start with. Take pure beeswax, melt and pour it in flat pans. Make it about $\frac{1}{4}$ inch thick. Cut it in squares to fit frames. Take a fine needle and thread, and sew it in frames. A few stitches will do. The bees will soon fasten the comb to suit themselves. The above will save you many a dollar.

Friend Mudge has also a bee-compound. I have not learned how much a bottle costs; but if used without his druggist's prescription he intimates that it will cost not less than \$500, for on the last page we read:

A reward of \$500 will be paid for the conviction of any one using the above without my permission.

Here is another item, in regard to extracted honey:

EXTRACTED HONEY.

Uncap the cells with a warm knife, put the comb in a sheet, hang it up in a warm room where there are no flies, and allow it to drip in a pan; stir the comb at intervals. When honey makes a person sick, boil and skim it before using. This will prevent it.

It is very fortunate that friend Mudge inserted the two last sentences; for such extracted honey would be quite apt to make almost anybody sick.

"PROLIFICKS."

I wish to say that I admire GLEANINGS, and the free-hearted manner in which you write about manners and things. I was about as much shocked when I came here from York State to see the manner the Sabbath was kept as you were in Milwaukee by the girls playing ball.

I found a swarm in the wood. "Prolificks" I call them. They are a large bee, and work on red clover. I had two swarms this spring from them. I now have 17 in all, from those two. No. 1 cast 4 swarms. The first of those 4 cast four more; one of those last four cast one swarm, and this last one sent off another—eleven in all. I never saw the like before.

GEORGE PECK.

Snow, Wis., Sept. 30, 1889.

WHY DIDN'T THE BEES TAKE THE FEED?

I undertook to feed back some of my uncapped honey about the first week in September. The bees made a rush for it, and would cluster thickly upon the combs, but would carry none of the honey into the hive. They have plenty of brood in all stages, also some uncapped honey in their hive. Why do they refuse to take the proffered feed?

Gordon, O., Sept. 9, 1889.

F. A. MYERS.

Without more particulars it is a hard matter for us to say why the bees did not carry any of the honey into their hives. If you undertook to feed when honey was coming in from the fields, of course the bees would pay little or no attention to it. We presume you put the combs in the open air, although you do not say so directly. If you set them in upper stories, very likely the bees decided the honey was well enough as it was, for it was their property already. In such cases they often refuse to move it into combs in the brood-nest below, unless only a small hole is

left open between the two stories. Even then they will not always do it. I have also seen honey of such poor quality that the bees would make a start on it and back out.

IN FAVOR OF CLIPPING, AND WHY; SEE QUESTION 138, PAGE 638.

No, we would rather lose ten queens than one swarm at the beginning of the surplus-honey season, as we lost two this year. They both came out at the same time. One had a clipped queen. The other had a young queen, unclipped. They both united and went elsewhere without even clustering, when, if both queens had been clipped, we would not have lost them. Again, a friend had a swarm come out and cluster on an old apple-tree limb, 25 feet from the ground, where no one could get; but the queen was clipped, and the swarm soon returned, and both queen and bees were saved without much trouble. PARSHALL & GROVER.

Cooperstown, N. Y., Sept. 4, 1889.

We grant all you say. I have had like experience; but we also had much trouble and vexation at other times, because our queens were clipped and could not fly.

SWEET CLOVER; FACTS WANTED.

I should like to know something definite about sweet clover as a honey-plant. I think it is the best honey-plant we have. Can some one, living where it is abundant, give us some facts in regard to it—not guess so, but facts? How much will it produce per acre? and how much will give a surplus with a given number of colonies, say 50 or 100? Sweet clover has been advocated as a honey-plant for a long time; and if it is as valuable as it appears to be, some one ought to be able to give us some valuable facts in regard to it. I have saved several bushels of the seed. I have no idea what I shall do with it. I did so because I think it is valuable as a honey-plant. I should like to sow 20 acres, and I am not certain but it will pay as well as any crop I can raise, but I do not know this. I wish I did. Who can tell me? My neighbors find fault about its growing along the roadside. I don't like to annoy my neighbors. I would rather raise it on my own land, provided I could make it pay to do so.

H. R. BOARDMAN.

East Townsend, O., Sept. 13, 1889.

It is a very hard matter to get definite facts in regard to any honey-plant. I suppose you noticed my reports of the sweet clover in the vicinity of Salt Lake City. In this case, however, no one could very well estimate the number of acres. There may have been hundreds; therefore one could not well say how much an acre would yield. I can say this, however, that they get tons of honey, of a quality equal to any thing known, allowing me to judge. Now, if you will excuse me I think you will have very great difficulty in getting a good stand on, say, 20 acres; and I am furthermore quite sure that it would not pay the cost, even if you did. Prof. Cook has just made some experiments on a large scale, in raising plants specially for honey. The State bears the expense, so he can afford it; but I am quite sure he has not made it pay. In Salt Lake City they can reclaim saleratus lots, as they call them, by getting a strong growth of sweet clover, and then plowing it under; therefore it becomes

an object with them. Possibly it does better on the saleratus or alkali soils of the desert.

SPIDER-PLANT IN ITS NATIVE HOME.

The spider-plant abounds here in great quantities. Acres and acres of it are here in the Arkansas Valley, and it grows right up to this city. It seems to me any quantity of seed could be procured here. I have no bees yet, but am bound to try them. How do you gather the seed of the spider-plant, and what is the demand for it? No mistake about it, it is the genuine spider-plant. I have grown it in Ohio, and am well acquainted with it. Lots of alfalfa clover here. I think bees ought to do well here.

Larned, Kan., Oct. 4, 1889.

A. H. DUFF.

Thanks, friend D. During my California trip I saw both spider-plant and Rocky Mountain bee-plant growing wild in different localities, though not in any great quantity. Since Samuel Wilson's extravagant puff of the Rocky Mountain bee-plant, there has been an unusual inquiry for the seed. The seed of both these plants is gathered by grasping the pods when they are ripe enough so as to begin to shell out of their own accord. Strip them into a tin pan or some similar utensil, then dry them for a few hours in the sun, when they are ready to bag up and put away. In a few days you can get a new supply, and so on. The seed continues to ripen for a period of weeks or even months, so that you can not well cut and thrash it as we do most other seeds. It can, however, be gathered out quite rapidly after one has become an expert in stripping the pods. Hold your pan under them, for many of them shell out as soon as they are touched. The seed usually retails at about 20 cts. an ounce, or \$2 a pound. It is used, however, only by bee-keepers.

GLASS-BLOWERS ON A STRIKE; A BLOCKADE ON MUTH JARS.

The glass-blowers of our factory are on a strike. Our friends were getting our order filled by another factory, whose blowers found it out, and refused to work also. I have since sent my order direct to this second factory; and if those blowers please, we shall have here 60 gross of jars by the end of this week. I am very sorry, but what shall we do about it? We have orders on hand for more than 100 gross, and shall fill them just as fast as we can do so.

CHAS. F. MUTH & SON.

Cincinnati, Sept. 18, 1889.

GALLBERRY HONEY AND ITS QUALITY.

I send you to-day by mail a small sample of honey made from the bloom of what we call "gallberry." It is a small bush, from 2 to 5 feet high, which grows profusely all over the southern part of the Gulf States, and is regarded somewhat as a nuisance, or at best a useless shrub. It has a very small white flower, which yields this kind of honey in great abundance while in bloom, which is about 20 days. With 26 hives I secured about 175 gallons of honey like the sample, which has netted me about \$1.00 per gallon, or 9 cents per lb. I send the sample to get your opinion of the honey as compared with the best Northern honey.

Moss Point, Miss., Sept. 13, 1889. M. M. EVANS.

In body and color it will compare favorably with any of the Northern honey. In

flavor it is very nearly equal to the best clover; perhaps some judges would call it fully equal. It ought to compete with any honey.

REPORTS ENCOURAGING.

FROM 4 TO 10, AND 218 LBS. OF COMB HONEY.

From four stocks I have increased to ten, and taken 218 lbs. comb honey. I believe all are in good condition to winter. A. A. LEWIS.

Waterbury, Vt., Sept. 23, 1889.

FROM 61 TO 103, AND 7000 LBS. HONEY.

The three pecks of Japanese buckwheat did well. We sowed it on an acre and a half, and got 40 bushels. We started in the spring with 61 colonies; increased to 103, and have about 5000 comb and 2000 extracted. There was hardly any fall honey, on account of dry weather. C. J. SCHAFER.

Eddyville, Iowa.

FROM 30 TO 73, AND 5800 LBS. OF SECTION HONEY.

My bees have done well. I had 30 colonies in the spring. I now have 73, and 5800 pounds of one-pound section honey—an average of 193¼ pounds per colony, spring count. The queen I got of you was a good one. I have some of her daughters that have made 200 pounds of one-pound section honey since they swarmed. One colony gained 19¼ pounds in one day, the 13th of June. We had plenty of rain, and the clover looks fine—better than last year at this time. Put me down as one of those lucky bee-men. Score one for the Italian bees. They are good enough for me—any way, the kind you sent me. JOHN BLODGET.

Empire Prairie, Mo., Sept. 26, 1889.

I do not remember to have had testimony from the queens we have sold before, in just the way you put it; but it strikes me as being a sensible way—that is, some of the daughters of the queen you bought of us have produced colonies giving 200 lbs. of comb honey, after they swarmed. Nineteen and one-fourth pounds a day is tremendous. Now, please do not get the opinion that we want to boast of our stock of Italians, nor to claim that they are better than other stock; for, in fact, we have done nothing to make them better, except to make frequent importations every season, of queens direct from Italy. Of course, our agent there is instructed to give us good strong healthy queens, and no other.

REPORTS DISCOURAGING.

ALMOST THOROUGHLY DISCOURAGED.

You may discontinue my GLEANINGS, and put me in Blasted Hopes, as I had 80 colonies this spring and have not got one pound of honey. I do not think that the bees will get enough to live on this winter. I have been a subscriber to GLEANINGS for 15 years, and I suppose I shall be lost without it; but I am almost thoroughly discouraged, as there has not been a good honey year here for about six years. JOHN BAXTER.

Crothersville, Ind., Sept. 20, 1889.

It is a little singular that you have had six consecutive bad years. Have none of your neighbors around you had good crops

of honey in all this time? One might be tempted to decide that your locality is a poor one; yet I am inclined to think, from reports, that every part of Indiana does, at least occasionally, give good honey-yields. Perhaps your very next season, after you give up the business, may be one that would have made amends for all the poor ones. If you examine our column of Reports Encouraging, you will see that great yields are occasionally reported where there has been a dearth of honey for perhaps several seasons. Before you give up, however, be sure to go around and visit your neighbors, and see whether there are not some who get good yields in spite of poor seasons. This is one of the good things about conventions. We are liable to fall into errors in thinking as well as errors in management; and a comparison with successful men will often show us where we have missed it.

OUR QUESTION-BOX.

With Replies from our best Authorities on Bees.

All queries sent in for this department should be briefly stated, and free from any possible ambiguity. The question or questions should be written upon a separate slip of paper, and marked, "For Our Question-Box."

QUESTION 146.—a. Do you propose to sell your honey on commission this year? b. If not, will you sell it by peddling or otherwise?

a. No; b. In our home market. A. J. COOK.

a. Yes, I always do when I have any. GEO. GRIMM.

No. I have an outlet for my honey, which I prefer. O. O. POPPLETON.

By commission, when I know the commission merchant is reliable. P. L. VIALLO.

Yes, unless I get a chance to sell it at wholesale. G. M. DOOLITTLE.

a. No; b. We sell to dealers for cash, and to bankers for cash. I don't do much with commission men. E. FRANCE.

a. No. b. To the jobber or the retailer, or wherever I can get the most for it, and get the cash with the least trouble. H. R. BOARDMAN.

a. I have not decided yet. I should prefer to sell direct to jobbers, and save commission. b. Peddling is too expensive in my locality. A. E. MANUM.

a. I will sell in part on commission. b. I have worked up this trade in Texas and elsewhere, where I sell considerable direct to merchants. R. WILKIN.

a. I prefer to sell for cash. b. I may have some peddled; but the only peddling I ever had done, the peddler kept all of the money but wanted more honey. P. H. ELWOOD.

a. No, sir. b. Yes, sir; that is, mostly "otherwise." Some customers in Toledo, and our groceries here, get away with all my surplus, and sometimes more. A. B. MASON.

We have for 20 years sold it by several methods. We ship on commission a little. We sell largely on orders. We sold a little by hiring peddlers, and we think this method very good. DADANT & SON.

a. "Not if the court knows itself." b. If I have honey to sell in any considerable quantity, which is not a certainty yet, I will endeavor to find a home market, in various ways. MRS. L. HARRISON.

a. I prefer to sell my honey rather than to send it to commission men. I will take the best market I can find. I shipped last year to five different States before I closed out my crop of 32,000 lbs.

S. I. FREEBORN.

I should always sell to him who would pay me the best price. Peddling is a business, and there are not many good honey-peddlers. But it will pay everybody to retail his goods if he can.

C. F. MUTH.

a. I have not decided. b. If I should get a large yield, nothing would please me better than to sell it all in the home market by peddling, and then crow over it. Should I get a light yield, I will peddle any way, but you will not hear the crow. RAMBLER.

That depends on how much I get. If we have as large a crop as I hope for, I may be obliged to send some off to be sold on commission. I prefer to sell to dealers, keeping them constantly supplied, but with only a small stock, and never asking them for pay until they have sold the honey. I have never tried peddling, and do not think I shall. J. A. GREEN.

a. Not if I can help it. There is such a terrible long tail to the commission cat that I do not like it. I like to realize upon the results of my labor some time during the present generation, while I still have the cheerful habit of residing in this world. b. I will try to sell it out and out for cash to some responsible dealer who buys that way.

JAMES HEDDON.

a. I can not say. b. I don't think I'm a born peddler, so I shall not try that, but I'll probably try to supply the groceries so far as they care to be supplied in my home market; and then it will depend on prices to be had, whether I sell in a lump to some large dealer at a distance, or send to one or more cities on commission. C. C. MILLER.

As my apiary is within an hour's drive of a large city, I have never shipped honey on commission. I do not propose to begin A. D. 1889. I take pains to encourage, and have built up a considerable custom of persons who call and buy. I think nearly every apiarist could do so if he went at it right. This is the best way, so far as it will go. Next establish regular routes and take honey to the doors of farmers and village people every six weeks or so. City people are worried by an excess of peddlers, and do not bite well. Next try the city groceries. If they will take your crop on terms satisfactory, very well; if not, as a last resort previous to sending to distant commission men, peddle in the city. E. E. HASTY.

The general impression seems to be in favor of selling honey outright, or attending to sales personally, in some way or other. I suppose one might get accustomed to the business of furnishing commission men so as to find it perhaps the easiest way of disposing of a very large crop; but the commission man should be an expert in handling honey, and the honey-producer should also be thoroughly posted, so as to be able to give the commission man reasonable directions in regard to the disposal.



Every boy or girl, under 15 years of age, who writes a letter for this department, CONTAINING SOME VALUABLE FACT, NOT GENERALLY KNOWN, ON BEES OR OTHER MATTERS, will receive one of David Cook's excellent five-cent Sunday-school books. Many of these books contain the same matter that you find in Sunday-school books costing from \$1.00 to \$1.50. If you have had one or more books, give us the names that we may not send the same twice. We have now in stock six different books, as follows: viz.: Sheer Off, Silver Keys, The Giant-Killer; or, The Roby Family, Rescued from Egypt, Pilgrim's Progress, and Ten Nights in a Bar-Room. We have also our Homes, Part I., and Our Homes, Part II. Besides the above books, you may have a photograph of our old house apiary, and a photograph of our own apiary, both taken a great many years ago. In the former is a picture of Novice, Blue Eyes, and Caddy, and a glimpse of Ernest. We have also some pretty little colored pictures of birds, fruits, flowers, etc., suitable for framing. You can have your choice of any one of the above pictures or books for every letter that gives us some valuable piece of information.

MORE ABOUT WOLVES, BEARS, AND OTHER WILD ANIMALS.

WRITTEN FOR THE JUVENILES BY UNCLE AMOS.

WHILE riding out with friend France, over the hills, we came to a point where some wonderful mounds rose clear up above the surrounding country. I called them mountains, and I feel like sticking to it still. They are really small mountains, and their height is so great that, when I started on my trip to Richland County, I could catch glimpses of them until we were twenty or thirty miles away. The railway runs out quite near one of them, and circles around it, so you can get a glimpse of it on all sides. These mounds are pretty near the center of the State of Wisconsin, if I am correct. Well, while we were riding along I kept watching the hills, rocks, and the streams, and pretty soon I told friend France that many of the rocks looked much like those in the region of Mammoth Cave, and I said I thought there must be caverns in those hills. But he declared there were no caves nor caverns, nor any thing of the sort. But I did not quite give up. Pretty soon we started to go over toward one of his apiaries. We had to go there crosslots. In the middle of a great big field my eye caught sight of a hole in the ground, as if a great big well had some time or other caved in there. Said I:

"Look here, friend France; I want you to tell me what that hole is doing out here in this lot."

"Why," said he, "that is what we call a chimney."

"But what is a chimney doing out here? Is not that the mouth of a cavern away down under the ground? When it rains does not the rain water pour right in it and go out of sight?"

He admitted that it did, but he did not believe there was any cave. My friend, if you ever see the water, after a rain, pouring into a hole in the ground, and disappearing, you may be sure there is a cavern down there; and if it were anywhere in my vi-

cinity I would dig down and see where the water went to, and may be have a cave or cavern of my own. He finally acknowledged that there were places in their vicinity where the water poured into these chimney-holes and came out on the banks of a river half a mile away. He said he knew it was the same water, on account of the color of the soil that washed into the hole and then came out as stated. Well, this made the study of Grant County of very much more interest to me during my whole visit. I wonder how many of my juvenile friends read what I said about the "machinery of the universe."

I told you about friend France's museum, where he had all sorts of wild animals stuffed, and fixed up so they looked exactly like life. He has for many years been a great wolf-hunter; and the funny part about it is, that, when he hunts wolves, he does not have any gun or dogs, nor even a pistol or a bowie-knife. When the wolves are killing sheep, and the folks can not catch the wolves, they send for friend France. He just starts off by himself, peeking about here and there with those sharp eyes of his, noticing a thousand things that you and I would never have noticed at all, and by and by he gets the wolf, *and the cubs too*. Perhaps most of you have heard the story of General Putnam, who crawled into the den of a fierce, bloodthirsty wolf, grabbed it by the ears, while his friends pulled him out with a rope attached to his feet. Friend France said, that, to one who is acquainted with the habits and nature of the wolf, this was no wonderful thing at all. He said he had crawled into wolves' dens, and got them out, over and over again. Years ago there was an old she-wolf that made a terrible havoc among the sheep in the vicinity of that very mound (or mountain), which to me was an unceasing wonder as it raised its head against the eastern sky. He tracked the wolf up into a den, or sort of cave, on the north side of the mound, where the hill is so steep that nobody can climb it. He hired a man to go with him, and they approached the cave just at nightfall. This cave was formed by a large rock resting against the mountain-side; and as a good deal of dirt had settled down under it, the crevice where the wolves crawled in and out was hardly large enough for a man of the size of friend France. So he took along a hoe, and dug the dirt away so he could get in. As it was so near night they decided to lie down and keep watch until morning. They judged that the old she-wolf was outside, because, during the hours of the night, they could hear a constant cat-like tread, or stepping, on the leaves and twigs above and below the entrance. Before very long his companion got frightened by the howling of the wolves, and went away, leaving friend France alone.

"But, didn't you keep up a big fire to keep the wolves away?"

"Fire!" ejaculated he; "what did I want of fire?"

"Why, so the wolves would not eat you up."

"Well, I reckon they would have had

tough chewing if they had set out on that job."

Morning finally came, and with his hoe he proceeded to make the cave big enough so he could get in. Then he plugged it up with a stone so the mother-wolf would not get in behind and bother him, and then he went for the cubs. After considerable digging he got hold of them; and, taking one under each arm, he carefully backed out; then he went back for another; but, probably getting a little elated at the pile of money he was going to get for their scalps, he made a little too much haste and bumped the head of one of the cubs against a projecting rock. At this the little chap set up a piteous whine; and you can imagine his consternation on hearing the deep, fierce, angry growl from the mother, who was not outside after all, but right there back of her cubs. Now, during all this time he had not so much as a match in his pocket. He crawled out with his cubs, however, laid them down by the others, put some matches in his pocket, and, armed with a spear which he sometimes took along for such emergencies, he went back into the den. When he got where he expected the war to begin, he scratched a match. As its feeble blaze lighted up the gloom within, the first object which he beheld was the mother-wolf, with open mouth, and eyes glaring like coals of fire. He thought first of pushing the spear right into her mouth; but experience had shown that this was not the best way. He had time, by the fitful glimmer, only to lower his spear toward the region of her heart, when she made an angry spring, so fierce that, when she struck the point of the spear, it threw him, spear and all, over back until the back end of the spear struck on a projecting rock, driving the blade clear through her body. He trudged home, not only with the scalp of the mother, but, if I recollect aright, four or five cubs. He says nothing is to be feared from wolves unless they come in great droves. They are sneaking, cowardly, and afraid even to look a courageous man in the eye. If they can sneak around behind so as to grab one's coat-tails they may venture an attack in that way when very hungry.

On going home late one night he was admonished by a friend to take a dog along, as it was certainly unsafe. It was in the winter time, and very soon he could see the wolves dodging behind him. The dog became frightened, and ran for his life. For several miles, two wolves kept so close to him that they actually snapped their teeth at his coat-tails; but he said that, so long as there were only two of them, he let them snap all they wished to, thinking he could stand it if they could. When they got through the woods into the clearing, they skulked off.

At another time he was employed to catch a she-wolf with several young ones. The young ones were too small to be afraid, and in a little while, he had taken their scalps and buried the bodies. His employers, however, complained bitterly because he caught the cubs and let the mother go, insinuating that this was a game of the wolf-hunters, to

leave the mother to furnish more cubs, so that the hunters could get the bounty for a new litter year after year. Friend France, however, told them to be patient, and have a little more charity, assuring them that he would have the mother in less than 24 hours. Sure enough, when night shrouded her from gaze she tracked them to the place where her darlings were buried, and commenced to dig them up, proposing, doubtless, to carry them home and give them a decent burial according to the customs and traditions of wolf fathers and mothers; but, alas! while she was showing her devotion to the last remains of her loved ones, friend France captured her also. This is one of their tricks for getting the mother after they have captured her cubs.

Now, little friends, if you want any more wolf-stories, you must ask our big friend Mr. France to tell them himself. Uncle Amos is now ready to give you some bear-stories.

Among other things that Prof. Cook said I must see before we went away, was their pet bear; and the pet bear at the Agricultural College is no exception to bears in general, in the matter of his love for honey. They do not let him take the honey out of the hives as the California and Wisconsin bears do; but when they want him to show off before visitors they just give him a bottle full. I walked down to the place where he is kept tied to a tree. He seemed quite glad to see me, putting up his nose in a very sociable manner, and licking my hand, and blinking at me in quite a knowing way with his queer little eyes. I did not discover the secret of his being glad to meet visitors, and scrape acquaintance, until I saw Charlie coming with a Muth jar holding nearly a pint of honey. The bear began at once making all sorts of expressions of approval, and reaching out for the honey; but as the programme was to take his picture with the Kodak while he "drank" the honey, I told Charlie that he must, if possible, get the bear to come out under the full blaze of the morning sun. According, Charlie unfastened the chain from the hickory-tree, and pulled him along in order to get him to climb over a pile of boards so as to get over the top of the picket fence. The bear came along quite cheerfully, keeping an eye on the bottle of honey. I was pleased to see the dexterity with which he climbed over the pickets, so as to avoid being pricked by their sharp points. Before he got out into the sunshine, however, he began to set up quite a whine, much like an urchin crying for a piece of gingerbread. As soon as he got the bottle between his paws, he stuck his long tongue away down into the honey; and, oh what a smacking there was! When he had licked out the honey as far as his tongue would go, he began to whine in real distress. But Prof. Cook bade me have my instrument ready, and just wait. Pretty soon it popped into the bear's head, that, if he could not coax the honey up to his mouth, he would have to put his mouth lowermost, so the honey would run into it. With a kind of grunt of satisfaction to think that he remembered how it was done,

he straightened himself up as you see in the picture.



BEAR TAKING HONEY OUT OF A MUTH JAR.

As he smacked his lips he tipped the bottle a little too fast; and it not only ran down into his mouth, but some of it ran over his eyes. That was of small consequence, however. He blinked with his eyes to get the honey off, while he smacked his lips and looked happy. Long after every drop was drained from the bottle, he kept poking his tongue around the inside and then outside, along his furry cheeks, and as near his eyes as his tongue would reach. Then he gave a purr of satisfaction. By the way, I forgot to mention that bears purr a good deal as cats do. When I first met him, and patted him on the head he commenced purring right away, as much as to say, "Why, of course we are glad to see Uncle Amos here, as well as the rest of the folks."

Now, I do not know how many bottles of honey his bearship could take at one meal. A pint bottle full did not seem to go a great way; and as it must be quite a little tax on the good friends at the Agricultural College, I do not know but we ought to pass the hat around, to help Prof. Cook bear the expense. His bearship ought really to attend our next National Convention. He could sample honey, any way.

Well, the sun was rising higher up. It would soon be train time, and there were more things to see yet. So Charlie picked up the chain, and told the bear he must go back. By the way, Charlie is a son of Prof. Cook's brother (who lives on the farm), and a nice boy he is. The bear, however, cast many lingering looks at the empty bottle, and with some reluctance started back for his inclosure. We were all in a hurry; and just as Charlie gave him a yauk to make him step quicker, as he climbed over the pickets again, his appearance was so irresistibly comical that I snapped the Kodak on him once more.

He was whining softly to himself because he could not have any more honey. In the meantime Charlie was tugging the bear's

chain until its collar had slipped around, pulling the fur the wrong way, and tipping one ear forward in a most comical sort of way; at the same time the honey had not

again, a walk in the morning is rather a novelty in my busy life.

Well, here we are at the depot, and we shall have to amuse ourselves by looking at the people coming for 40 minutes yet. But that soon passes, as we greet this one and that as they come up to the platform.

Toot! toot! sounds the engine, and up it comes, gliding gracefully by, and stopping quietly just beyond the platform. In we all get, and soon we start, not with the jerk, jerk, that used to be so trying, but smoothly we go, gaining in speed until the highest speed these narrow-gauge tracks will allow is attained. Soon we get to a station, and slacken up for a moment to give the station agent time to signal stop or go on. We stop, as a couple of young fellows wish to go with us. Then on we go, rattling over bridges. Oh! bless me, isn't it pleasant riding on the rails? At nearly all the stations and depots, some one or more join our party. The young folks keep up a constant chatter; while we of more sedate and maturer years listen, and smile at their sallies, without the trouble of thought. We just rest and enjoy. Soon San Luis looms up in sight; and when we stop, many get off the train and more get on, so that, as we glide down the cañon that leads to the sea, where Port Harford is, we are quite crowded; but good order prevails, and we keep a sharp lookout for familiar landmarks. Here we go, past the Catholic burying-ground, then a bare rocky hillside seems to glide past, then the large and handsomely arranged Protestant cemetery appears. Then on, on, until "Oil Wells!" is shouted. About half the people start; and when the train stops, off we get. Baby's wraps and lunch-baskets are distributed, and we cross the little bridges, walk under those grand old oaks and sycamores, and in three minutes we arrive at the bath-house.

"What! bath-houses?" says one; "do you bathe in oil?"

We laugh, having forgotten that all our party did not know it was hot sulphur water we came to see, and not oil.

"No, we do not bathe in oil; but do you see that water pouring out of that six-inch pipe, up on that platform?"

"Yes."

"Well, the company of men who owned this tract of 100 acres thought that there was every indication of oil. You see, the mountain back of the well is coal and slate formation. Well, they decided to bore for oil, so they got an artesian-well outfit, and commenced boring. When they got down about 400 feet they struck this hot sulphur water. They shut it off, although it was a very strong stream, and bored 500 feet more, but found nothing but the hot sulphur water. So, as there are no warm baths near here they decided to let the water run, and they built that long bath-house, that plunge-bath house, and the large hotel you see over there, and then got the cars to stop and let passengers off at their path, and now the place goes by the name of Oil Wells. It is well patronized, especially on excursion days, which occur about every two weeks."

The boys have rushed off to explore every place, and to speak for a chance in the plunge. No bathtubs for them, but we speak for a tub and get it. The water is just the right warmth to be delightful. The baby thinks it a little hot, but gives only one or two grunts, and then proceeds to paddle and splash



HIS BEARSHIP CLIMBING A PICKET FENCE.

ceased dripping from his eyelids. Meanwhile one of his hind feet was clawing in vain to secure a foothold on the smooth pickets. Finally he got on to a strip of board and got over. He did not say good-by as I started off with the Kodak; but his comical look, and his mischievous-looking countenance, were "better than a circus," as the boys sometimes say.

Now, little friends, I hope you as well as Uncle Amos know a little more about bears and wolves than you once did; and while we defend ourselves from their savage nature and warlike claws, let us remember that they are God's creatures, and, in one sense, our neighbors.

OFF TO THE OIL (?) WELLS.

AUNT KATIE TAKES US OFF TO ANOTHER PICNIC IN CALIFORNIA.

AS you all seemed to enjoy the trip we took up to Zaca Lake, suppose you go with us to-day to the oil-wells near Port Harford. They are 70 miles away, so we will go on the excursion train that runs there and back for one dollar. Ernest is calling, "Come, mamma, are you not ready yet?"

"I will take the lunch-basket; and, Lewis, you start with the baby, while mamma picks up the odds and ends, and fastens the doors."

"As mamma has got every thing done that she can do until you all get out of the house, away you go, and we will follow," says papa.

"Hurry up, or you will be late," is the last we hear from the youngsters as they rush out of sight, headed for the depot. We shall get there in plenty of time, so we will walk slow and get over the hubbub, and enjoy this lovely morning air. I especially appreciate the slow walk, for I have been pretty busy ever since 6 A. M., and it is now 8; and then,

with the greatest delight. Oh, the delicious rest and comfort we get from that bath! We are all as red as beets when we finally emerge from the rooms. Now, be careful and not sit or stand where the cool ocean wind will blow upon you. Here is a handsome pavilion. We will spread our lunch and take our ease in its shelter, before we ramble about. The boys gobble down (they do not eat) their share of the lunch, and that is the last we see of them till about train time. We eat and rest, and then wander up to the hotel, to look for friends. We are surprised at finding that we are well acquainted with the landlady and two or three of the guests, being old acquaintances. We pass a pleasant hour on the broad veranda, looking at the charming natural view, and watching the picnic parties, campers, and the constant going and coming of vehicles loaded with live freight. There is no loud talk or rough manners; all seem quietly happy.

It is about train time. Get the things ready, for we must leave this sylvan retreat, and hie away home again, taking with us a pleasant memory of a day pleasantly spent. Puff, puff, whiz, here's the train. We all scramble on; and just as day is fading we arrive at home. AUNT KATIE HILTON.

Los Alamos, Cal.

TRYING TO RAISE POP-CORN.

I planted some pop-corn. It did not do very well. Two years ago I had a piece, and the musk-rats helped me harvest it. I think if I keep trying I may have a good crop some time. I have a colt two years old, named Pedro. I am saving money to buy a saddle. I have a lamb. Its mother is dead. MORRISON J. McCLAUGHRY, age 10.

Salem, N. Y., Sept. 5, 1889.

TOBACCO A REMEDY FOR ROBBING.

Father has 26 stands of bees. While I believe as you do about tobacco, we had one case in our apiary where tobacco was a help to us. Pa opened a hive of bees when they were not getting much honey, and the other bees got to robbing them, and they got so mad that we could not go near them. Pa put some rotten wood in the smoker and smoked the robbers with it, but it would do no good. So ma put some tobacco in the smoker and went behind the hive and smoked them with it, and it quieted them in a little while. EDITH STAHL.

Rochester, Ky., Sept. 2, 1889.

A QUEEN THAT LIVED 5 YEARS.

In one of the back numbers or GLEANINGS you say it is a rare thing for a queen to live 4 years. We had one that we are certain was 5, and might have been 6 or 7 for all we know. She was an Italian, and we found her in a tree. My brother Stanley was stung this spring, and in a few minutes he was all over blotches. He breathed with difficulty, as if he had the croup. We were very much alarmed, but pa gave him brandy, and he soon recovered. Pa wintered his bees in the cellar, and they came through all right. ETHEL EDWARDS.

Ingersoll, Ont., Can., June 3, 1889.

THE FLORIDA SCORPION.

As I don't know much about bees that is not generally known, I will tell you something about the Florida scorpion. This scorpion is about an inch and a quarter long, grayish colored; has six legs, and a tail as long as its body. Its tail is jointed,

and has two little sharp hooks on the end. When it is angry it flirts its tail over its back and sticks these hooks into whatever it holds in its fore feet. Its sting is poisonous, and hurts a good deal, but never kills any one. We have found a good many in our house, in the bedrooms and kitchen. They like to get among blankets and clothing. Florida people learn to shake their clothes well before putting them on. I don't like Florida as well as Pennsylvania. DON C. BAIRD.

Orlando, Fla., Sept. 5, 1889.

ABOUT A QUEEN THAT STOPPED TO VISIT WITH A LITTLE GIRL.

Last spring we took five gallons of honey that the bees had gathered from wild flowers; but in June papa bought some buckwheat for the bees, and they gathered a good portion of honey from that. We took the upper story off, that they might store the honey away for winter food. We fed our bees last winter on sugar syrup. Papa takes GLEANINGS, and we always welcome its coming, with much pleasure.

One morning I was in the yard looking at the hives, and was ready to go into the house, when a queen came through the air and alighted on my arm. I caught her very gently, so as to show her to mamma; then I held her up on my hand, and she flew off to one of the hives. MAMIE BEDFORD.

Fayette, Wis., Sept. 27, 1889.

THE PECAN-TREE.

I promised to tell about pecans. The pecan-tree is large, like a walnut. Its leaves are like walnut. The pecan blooms in April, and the nuts get ripe in October and November. It begins to bear at the age of five to fifteen. The age of the pecan is unknown. Trees are found four and five feet through. At the age of fifteen it is not more than ten inches through. The nut of the pecan is in a hull, like the walnut, only much thinner, and it is divided into four parts. As the pecan gets ripe, the hull cracks open and lets the pecan drop. From one pecan up to six grow in a bunch. It is a pretty sight to see them growing in that manner. Some people wait till the pecans drop off the trees, to gather them. Sometimes they knock them down with a club. But the best way is to climb a tree with a long pole and knock them down with it, and pick them up. Sometimes the pecans hang on the trees until March. A 49 pound flour-sack holds a bushel, just even. There are 42 pounds in a bushel. Pecans sell for \$1.50 to \$3.50 per bushel.

Belton, Texas.

WM. MORGAN.

We are glad to know about the pecans. They have frequently been sent us from the South, and we have sometimes succeeded in selling them to a limited extent. I had already judged, by the appearance and taste of the nut, that they were something like our shellbark hickory-nuts. I do not quite like the idea, however, of clubbing nut-bearing trees with poles. Does it not injure the future usefulness of the tree? It seems to me that nuts of all kinds are much nicer if we wait till old dame Nature shells them out and lets them drop of her own accord. If, however, they hang on as you intimate, perhaps a gentle bumping might be in order, as a suggestion to the tree that it was time for her to shell out and drop her treasures.

A RUINED LIFE.

A SAD BUT TRUE STORY.

"Do you know what has become of Alice B—, or do you ever hear any thing about her any more?"

"No," was the reply; "I have not heard of her for a long time; but the last time I heard, she was in California. Her parents are living next door to me, and I see them quite frequently; but she has been such a source of grief to them that I never mention her name in their presence any more. She quite broke their hearts."

Hearing the above conversation as it passed between two elderly ladies of my acquaintance, and having seen the person they were speaking of, and knowing something of the latter part of her career, I felt somewhat curious to know more of her early life. Hence I embraced this opportunity of making some inquiries of one who knew the whole sad story. Here it is in brief, and from one who had been her friend:

Alice B— was a very pretty girl, and when quite young was married to Mr. W—, with a fair prospect of a happy life. But she was exceedingly fond of admiration and gay society, and it was not long before she began to neglect husband and home for other society and gayer scenes. Only a few years of such a life—for they were years of misery and unhappiness—and then her husband left her, and she went home to her father's house, taking her two little children with her. Leaving them there, she went to another town and soon obtained a divorce.

About that time she became acquainted with a widower, a very respectable man, nearly twice her age, and possessed of considerable property. After a very brief courtship they were married, and went to reside in the vicinity of her former home. For a time all seemed to be going on quietly and happily; and for the sake of her friends as much as for her own, she was received in the best circles, and her past life ignored.

But, alas! a quiet life did not satisfy her; and her love of admiration, and her flirtations, became so notorious that people shook their heads, looked askance, and began to shun her. Friends talked with her, urging her to live a different life, but without avail.

One day, when in the midst of a gay company, she received a message summoning her home. Her husband had met with an accident, been seriously injured, and was thought to be dying. He was unconscious, and, after lingering in great agony for two days, death came to his relief. In the two years of their married life a little boy had come to their home; but the father had scarcely been laid to rest ere the little one sickened, and he, too, passed away. For a few months the mother seemed very penitent, and almost crushed by her great sorrow. Then the charms of the old life returned, and, seeming to forget every thing else, she went from bad to worse, and, becoming infatuated with a married man of bad repute, eloped with him and went west. She had left all for him; but he soon tired of her and deserted her, leaving her a stranger in a strange land.

What a wretched ending to what might have been a happy life! Can you imagine any cause for

such a ruined life? Let me tell you what her old father said:

"Alice was ruined by reading novels! We knew she was fond of reading, but we did not know the character of the literature in which she indulged until it was too late, and the mischief was done. She had spent much of her time poring over sensational novels—books filled with descriptions of flirtations, jealousy, and divorce—until her whole being became imbued with the poison, and she lived the characters over again in her own life. Her mind was poisoned, and so filled with 'blood-and-thunder' stories that every good impulse seemed destroyed."

"Yes, Alice was ruined by reading *trashy, sensational books and papers.*"

How many lives have been wrecked and saddened in this subtle way! Dear reader, does not this story contain a warning? Should not parents, and others who have young people in their care, consider it as much of a duty to feed the minds of the young with good, pure literature, as to feed the bodies with healthful food? The mind *must* have food, just as certainly as the body; and if it does not find healthful food, it generally finds plenty of a poor character. In these days, when so much good literature can be obtained for a small sum of money, is it not a duty to make provision for the home? Children crave something more than the Bible and Bible stories; and though these should always have a prominent place, if something more is not furnished them they will be sure to find it for themselves. Will it be "Broken Hearts," and such trash, or something good and helpful, stimulating them to live good, pure lives?

IPAVA, ILLS.

ANNA B. QUILLIN.

My good friend, there are many and many cases like the one you mention, where lives have been ruined by reading trashy, sensational novels and papers. When in my teens I was greatly given to such reading myself; and the memory of the false impressions and false teaching that I then received will haunt me till death. Had I not been turned squarely about by giving my heart to Christ Jesus, there is no knowing where I might have been by this time; and I think now that the very best safeguard for any one is a complete surrender to Him whose spirit was "not to minister unto, but to minister." Sometimes, during late years I have been foolish enough to waste a little time in reading something that has no point or moral to it; and I always feel guilty and ashamed of myself afterward. Perhaps many will think it too strict, but I do believe that great good would follow if it were a custom for every child in his teens to submit to his father or mother every book before reading it. The careful and prayerful parent can in five minutes determine whether the book be a profitable one or not. I would first turn to the introduction, to see what the author has to say, or what reasons he has to give for writing a book. Then I would read perhaps half a page in the middle, and may be as much at the close. Five minutes is enough to decide whether the book is for or against righteousness. If it has nothing to say either way, I would reject it. "He that is not for me is against me." Many of us are in the habit of keep-

ing a careful, sharp eye about our gardens and our bee-hives, to see whether an enemy be lurking. My friend, it is a thousand times more important that you keep a sharp eye about the house, to see what kinds of books and papers are being brought in; and especially is this keen scrutiny needed in a family of many children. I would not deprive these little minds of books and papers; but whenever one book is taken away, or sent home, or back to the library, bring three or four good ones to occupy its place. Books and papers are cheap and plentiful; but do not admit them solely because they are cheap. Our stenographer just now asks for a list of good books. In the way of fiction, I know of nothing better in English print than Pansy's entire series. And, to cut the matter short, I would recommend the Sunday school library in any of our established churches. I can not remember that I have ever read one (and I have read a good many purposely to decide whether they were fit mental food for our children) without feeling that it had brought me nearer to Christ Jesus.

NOTES OF TRAVEL.

SOMETHING ABOUT ARTIFICIAL HONEY-COMB.

MY last visit among the bee-keepers was at Bell Branch, near Detroit, where friend M. H. Hunt hails from. The picture of Mr. Hunt's pretty apiary will be found on page 625 of our issue for Aug. 1. The picture, however, does not do justice at all. The hives are located in groups under large branching apple-trees. The trees are trimmed so as to be out of the way of one's head when working among the hives. By the way, when wearing a bee-veil you can not afford to have brush or limbs of trees catching on to your veil, tearing it or pulling it off from your face. If you do not fix things conveniently for rapid and uninterrupted work, when you get a big honey-crop you will be sorry.

Friend H. has two children—a boy and a girl. The girl is about the age of Blue Eyes; and as Blue Eyes was with me on my return trip, they two very soon became quite sociable. I think it is no more than fair to state that friend Hunt is one of our "gilt-edged" business men. Nobody ever has to ask him for money when he is owing; and, in fact, I do not believe we have ever sent him even a statement by way of reminder. He is also so prompt, careful, and accurate in filling orders that I can not remember of having ever received so much as a breath of complaint against him.

The horse-power, which we described and illustrated, which he first used for hive-making, has been laid aside, and a neat little steam-engine takes its place. I believe, however, he buys most of his hives and sections from larger manufacturers, using his engine only for filling special orders, and for making odd-sized hives, or to fill out some order that is wanted in a great hurry. He has a nice stock of lumber, accurately planed at a planing-mill, piled up ready for

emergencies; and with his help and his machinery he can very quickly supply any thing unusual or in immediate want. Near his factory is a buckwheat field, so uniform and of such wonderful luxuriance that I snapped the Kodak on it once or twice; but it did not work up so as to be worthy of a place in print. Friend Hunt is only eight miles from Detroit, therefore he has ample facilities for getting lumber at low prices, or any thing else he may need for the supply business; but as he is three or four miles from a railroad station, he contemplates moving up nearer by.

One inducement to call on friend Hunt was the promise that he would go with me to visit the Eureka Supply Co., in Detroit. This company is arranging to manufacture artificial honey-comb, under friend Weed's patent. This has been frequently mentioned in years past, friend Weed having, some time ago, an advertisement in GLEANINGS, of small pieces of artificial honey-comb. This was while he was located in Cincinnati. We were very kindly received, and even hospitably treated. We saw the machinery for making the comb, and it was all very kindly explained. By a powerful hydraulic press, cakes of wax, warmed to just the right temperature, are forced through proper dies, so as to form cells of honey-comb, not only deep enough for worker-bees, but two or three feet deep, if you choose. In fact, a great big stick, or log, of cells of honey-comb, reminded me very much of a split chestnut fence-post, the cells looking like the pores of the wood, only being ever so much larger. Now, in order to make honey-comb, all you have to do is to cut off a slice $\frac{1}{4}$ inch thick. The slices are cut off like cutting slices from a loaf of bread. Of course, this is not honey-comb, because the cells have no bottom half way through, and here is the great problem—how shall we make a bottom to this honey-comb? I suggested at once that sheets of comb, with holes clear through, be given the bees, and let them see what they can do with it.* I was surprised to learn, however, that the Weed brothers had never tried it. I agreed to make the test in less than a week if they would send me a piece; but it has not come yet.

Just a word about slicing off the comb. How do you suppose they do it—saw it off? Not much, where the cell-walls are about as thin as natural comb. Cut it off with a knife? Not much better. The only thing is a hot wire. But the melted beeswax cools the wire off so quickly that nothing but an electric current can supply the heat fast enough; and accordingly they had just put in expensive electrical machinery, and an incandescent platinum wire capable of melting off slices big enough to fill a Langstroth frame. May be you would like to know how the die is made that produces the cells. As it is fully secured by patents, I obtained permission to describe it. Even if

* If the bees will fill comb with cells reaching clear through, when extracting we shall need to uncap only one side. Then comes the question, Will the bees fill the comb again, having access to only one side?

you saw the machinery, and looked at it with a magnifying-glass, you would scarcely understand it without explanation. In the first place, the wax is forced through a perforated plate. It then comes out in strings like so many worms, if you will excuse the illustration. Well, these strings are obliged to pass under an enormous pressure between a series of hexagonal plates screwed fast to the perforated plate. Suppose you had a lot of six-sided buttons, placed with such mechanical exactness that the wax that oozed up between them should be as thin as honey-comb. These tubes of wax would then rise up, as they do in fact, making a "log of wood" composed of six-sided cells. Will this machine ever enable them to get the \$1000 by manufacturing for sale artificial comb honey? Never. Even if they could get a bottom to the cells, it could not be capped over so as to imitate nature. Any bungler could tell the difference, just as any bungler could tell artificial strawberries from nature's make. The invention, however, may give us frames of comb more accurate than the bees ever produced, and possibly cheaper than the bees can make them. Our friends have been at work at it, however, a good many years, and have, during the past season, offered for sale pieces large enough to fill a section of honey; but the price will not as yet permit it to come into general use among bee-keepers.

I feel greatly indebted to the members of the Eureka Supply Co. for the information they gave me in regard to the present status of electrical science. They very kindly took me through the electric-light establishments in Detroit, and gave me an insight into the machinery and workings of the science that will make me feel under obligations to them for a good while.

OUR HOMES.

But now they desire a better country, that is, a heavenly; wherefore God is not ashamed to be called their God; for he hath prepared for them a city.—HEB. 11:16.

Not to be ministered unto, but to minister.—MATTHEW 20:28.

AS soon as I started on my homeward trip from Wisconsin I unconsciously began humming the familiar hymn that commences:

"One sweetly solemn thought."

I do not know what brought it to mind, but it seemed to me all at once as if I had never appreciated the wonderful thought embodied in the hymn,—

"I'm nearer home to-day than I have been before."

I believe that a great part of the world feel a dread of death. Many feel sad to think they are growing old. How is it with you, my friend? Have gray hairs and wrinkles terrors for you? Do you feel sad to think that the springtime of buoyant youth is slipping and passing? As your eyesight fails, and you begin to need spectacles, does it bring a thought of dread that your sight may fail altogether? Hearing

will very likely become impaired also. Your steps will begin to grow feeble, and may be rheumatic pains have already begun to make you twinge. Robert Ingersoll has given perhaps the most vivid picture I have seen drawn of death, as a dark, dismal abyss. From his standpoint of view, there was not one ray of light—nothing at all to make one joyous, but, rather, the utter extinguishing of every thing beautiful and bright. May God be praised, it is not so with the Christian. In the language I have quoted from, it is "Nearer my Father's house," where "burdens are laid down." When I am doing my duty I often feel not only joyous but buoyant at the thought of going home. Gray hairs that have come while in the Master's service have no terrors for me. My eyesight has failed greatly during the past summer. Unless the light is very strong, I am entirely unable to read fine print without glasses. Were it not for the invention of spectacles it would be a sad, very sad, cross to bear; but with the aid of even those that are furnished for an almost insignificant price, I can see just as well as I ever did. May the Lord be praised for the invention of spectacles! But suppose my eyes keep on failing until even specs do no good—what then? Never mind, dear friend. The resources are not limited with Him whom I serve; and he has said that not one good thing shall be withheld from those who fear him. Since I have been following him, no good thing *has* been withheld, and a remedy has been provided for every ill that life has brought. When I can *read* no more (if that time shall ever come), I am sure that Christ Jesus will help me to be useful in some way or other. Now, it would be wrong to be in a hurry to get through with life's duties and cares; but it is *not* wrong to rejoice at the thought of that home "where many mansions be."

I enjoyed my trips exceedingly, both to Wisconsin and California; but for all that, there came a pleasant thrill when I thought of my home and the loved ones who would be glad to see me. In the same way I have been thinking of that heavenly home—that "better country" spoken of in the language of our text. Before death comes, very likely I shall have grievous pains, and may be sore crosses to bear; and sometimes when I think of how others are called upon to suffer, I tremble for fear I may not have the grace and fortitude to bear suffering as they do. But then, again, comes the promise, "Lo, I am with you alway, even to the end of the world." Perhaps some of you may say, "Now, look here, brother Root, we don't want you to be making calculations about that 'heavenly home,' for many a long year. There is work that we want you to do. Had you not better be planning to do it 'while it is day, for the night cometh when no man can work?'"

You are right, my good friend; and the suggestion just brings me to the second text. You see I have two of them for my talk to-day. What would God have us do while we are *waiting*? Why, the second text answers the question—"Not to be ministered unto, but to *minister*." If we want to be

happy and buoyant and rejoicing always, let us follow the text, as did even our Lord and Master; for he came "not to be ministered unto, but to minister, and to give his life a ransom for many."

In many avocations and pursuits of life, we are crowded. Sometimes the house you live in is too small. Sometimes the young folks, when they get married, start to live with father and mother; and with the love of Christ Jesus in the heart of even one side of the house, there will never be any feeling of being crowded. Yet the feeling sometimes comes, however. The young folks want to have more room and more liberty. A good many of the friends complain because so many pitch right into any line of business when it begins to be a little profitable. Somebody makes a pretty good thing of raising strawberries. Then everybody else in the neighborhood goes to raising them until they hardly bring enough to pay the pickers. There is a constant crowd. Somebody starts a drygoods store in a little town. Pretty soon another one starts up on the opposite corner. There is not business for both of them. It is overdone. So with the drug-store and the printing-business; so with the hotel-keeper. Why, I have even heard such things whispered about the *bee-journals*. GLEANINGS IN BEE CULTURE has done tolerably well; and others start bee-journals, thinking that they may also do tolerably well. By and by the old trouble comes up—there are *too many* bee-journals—the field is overworked. I did not say so, my friend; but it is what the *world* says. We occasionally meet people who have tried strawberries, honey-raising, dry goods, drugs, hotel-keeping, and may be they have started a bee-journal. All of them fail, because there was not a chance anywhere for a man to turn an honest penny. Sharpers and the tricky ones get all the money, so they say. Sometimes they indulge in bitter flings toward the middlemen, who "toil not, neither do they spin." They do not wait for their heavenly Father to feed them—at least so the world says—but get a pretty good feed by cheating *right and left*. Now, please remember, friends, that I have not said this. I do not believe it. The middlemen are my friends, and I love them. I hope I should love them, even if they *were* all enemies; but I am glad they are not. The world has all way of talking about the "bloated aristocrat." It pains me to hear this term, because it is a hateful one. Well, I have made quite an array of truths, have I not? I have not spoken of *strikes and trusts*, but I might have done so. Is there a remedy? Why, Heaven bless you, my friend, to be sure there is; and the remedy is this last text of mine. I wish it were painted on a great big shingle, and tacked up at all the street corners—yes, in letters so big that they could be put up above the tops of the highest trees or meeting-house steeples. Why, since I think of it, I do not know but that it would be more needed above the steeples than over the trees. I should like to see it across the sky—"Not to be ministered unto, but to minister." Now, please do not turn away, dear friend.

There is room for all the world under the banner of this text. There is plenty of employment, with *good pay* to be had, right along in this line. The business will not be overdone for a thousand years. No, it will *never* be overdone. Thousands and thousands may enter into it, and yet there will be elbow-room—plenty of room for more—"Not to be ministered unto, but to minister." The sad part of it is, that human nature unregenerated is continually clamoring for servants to wait on them; and if the servants would work without pay, all the better. Christ Jesus stands almost alone in this grand, glorious, loving work of helping people—helping everybody, being glad because you can help—being a servant. The world clamors for fat salaries and not much hard work. The servant of Christ wants only a chance to *serve* somebody. He does not trouble himself about the pay, whether it be big or little. Why, bless your heart, dear brother and sister, he does not need to, for the Lord of all—the Judge of all the earth—takes care of the pay. He has said, in a thousand ways, that we need not worry; and he is the best paymaster on earth—more prompt and liberal than any man who ever lived. There is only a little condition; and that condition is, that we "seek first the kingdom of God, and his righteousness," and the reward is promised that "*all things* shall be added unto you." It is true. I know it is true; for every thing around me emphasizes the truth of it. Now, when I started out, perhaps you did not see that my two texts had any connection with each other. Do you see it now, dear friends? If we love to minister to those around us—to these brothers and sisters, shall we not go through life rejoicing, and singing the little hymn that gladdened my heart and made me joyous as I approached my home?

One sweetly solemn thought
Comes to me o'er and o'er;
I'm nearer home to-day, to-day,
Than I have been before.

CHORUS.

Nearer my home, nearer my home,
Nearer my home to-day, to-day,
Than I have been before.

Nearer my Father's house,
Where many mansions be;
Nearer the great white throne to-day,
Nearer the crystal sea.

Nearer the bound of life,
Where burdens are laid down;
Nearer to leave the cross to-day,
And nearer to the crown.

Be near me when my feet
Are slipping o'er the brink;
For I am nearer home to-day,
Perhaps, than now I think.

Would you like an illustration or two of the way I understand this text? A few days ago, a man with a very heavy load, in driving on to the hay-scales, got one of the wheels between the platform and the bordering timbers. The enormous weight had squeezed the wheel down so that the load would apparently have to be removed before it could be extricated. He stood with a troubled look on his face, for he was doubtless in a hurry.

"My friend," said I, "don't throw your load off. We have four or five powerful jackscrews in the blacksmith-shop, and with them you can raise the wheel out of there in a twinkling, load and all."

Well, he looked happy; but I think I enjoyed it more than he did. I was exceedingly busy that day, and some of my own work had to be neglected for a few minutes. At another time a teamster would have broken his wagon on the railroad track had I not stopped to shove a board under the wheel, and extricate it from its dangerous predicament. I then explained to him the matter, and told him I had seen many good wheels broken down by attempting to cross a railroad track at an angle. A man was rolling a heavy barrel of honey from the depot platform on to his wagon. The wagon-bed was frail, and the great weight would assuredly have smashed it down at once, breaking the wagon, and may be breaking a limb of the driver. I ran rapidly, and called to him just in time. A bit of board set up endwise under the weak point made it safe. Now, accidents are occurring almost daily because people often learn only by experience about these things. Some days I tire myself out, and perhaps neglect my own work, in teaching the younger ones how to avoid accidents—how to get along safely and easily with their work—may be how to prevent catching cold, when a chilly October afternoon comes after these beautiful sunny days. Sometimes I can get in a word for Christ Jesus; and if it seems to be well received, such *ministering* makes me happier than *any thing* else. When night comes I am very tired, and may be the printers scold because they have not had the copy they needed. But I am happy, nevertheless. And may be if I had written the copy without doing the *ministering*, I should not have been able to give you something really helpful. And as I close I feel like thanking the dear Savior because he has given me a helpful message to deliver to you to-day. I am sure the message will be helpful, for it is builded on the solid rock of Christ's promises—not to be *ministered unto*, but to minister.

SPECIAL DEPARTMENT FOR A. I. ROOT, AND HIS FRIENDS WHO LOVE TO RAISE CROPS.

WHAT SHALL WE PLANT IN THE MIDDLE OF OCTOBER?

WELL, friends, we can not plant very much, unless it is rye or spinach, or winter-onion sets, or something of that nature. We can, however, start gardening almost as well as in spring, if we have hot-beds, cold-frames, or greenhouses. During October and November, we can grow a great many things without fire heat or even the heat of manure. The simple protection of sash will give results equal to March and April. Lettuce, radishes, and other things may be matured under sash, without any heat. Tomatoes, lima beans, and a host of other things that are not consumed before frost, may be sim-

ply laid on the ground, attached to the vines under sash, and they will ripen up nicely. Even though we can not plant outdoors, there is lots of work that we can do. We have some beautiful celery that was transplanted in very rich ground Oct. 1. As we have had abundant rains, it is now making a very beautiful growth. The plants were, however, very strong, and each one was taken up with a ball of earth. It is now, Oct. 10, ready to bank. I merely mention this to show you what may be done with vacant ground where it is very rich. Ours was where we dug a lot of very fine Rural Blush potatoes. Another thing: Even if it is not advisable to set out strawberries later, you can fix the ground all ready for them in the spring. That is just what we are doing this beautiful Indian-summer afternoon. The boys are gathering the bush lima beans, and pulling up the tomatoes, while the big team is drawing manure and covering the ground as thick as it can be plowed under nicely. We are going to fit it exactly as I described on page 721. Just as soon as the ground thaws in the spring, the plants will be put in with transplanting-tubes. We could put them in this fall without any trouble, provided they were mulched heavily. But it will probably be cheaper to fix the ground now, and then let the plants stand in the matted row where they are, until spring.

THE IGNOTUM TOMATO.

We have received testimonials enough in praise of this tomato to make a startling pamphlet. Below is one of them:

I received from you a packet of Ignotum tomato seed, containing just 20 seeds. Nineteen seeds germinated. One plant was accidentally broken off. They were transplanted in open ground, directly from the greenhouse, May 23d, the same day that I transplanted Dwarf Champions from the cold-frame, and the first ripe tomatoes were picked from Ignotum. One plant of Ignotum turned out to be a tree-tomato, and another set such rough fruit that I pulled it out, so I had left but 16 plants. From these I picked about half a bushel of tomatoes *per plant*, and from that amount I have saved 28 ounces of seed. Half a bushel of tomatoes to the plant, when planted 6 ft. x 5, is a yield of 650 bushel per acre. Pretty large, I think.

F. S. McCLELLAND.

New Brighton, Pa., Oct. 7, 1889.

The above not only gives the good points, but some of the bad ones. It is true, that some of the plants produce bad-shaped fruit; but by selecting seeds persistently from one of the best, I think we shall correct the tendency. On our grounds but very few plants this season produced any thing different from the regular type. I admit that the tomato is not perfect in every respect. There are other tomatoes of better shape; but no tomato, so far as I know, has as many desirable points. I have offered our friend \$7.00 for his 28 ounces of seed, so you see there was more to my little present of tomato seeds than any of us thought of at the time. The little gift has given quite a number of the friends several dollars—in one case \$15.00 or \$16.00; and I feel glad

over it, exactly as I have tried to describe to you in the Home Papers for this issue.

CATCHING DESTRUCTIVE MOTHS BY BURNING A LAMP IN A TUB OF WATER AT NIGHT—SEE PAGE 790.

Prof. Cook replies to the matter as below:

The cut-worm moths and the cabbage plusia could be caught by a light over a tub of water; but the remedy is hardly practical, as the moths fly at night, and the time varies, so no one would be on the lookout, and ready. The worst pests, the cabbage-butterfly larvæ, fly by day, and would not be killed at all. Buhach (California pyrethrum) kills all, is cheap, easy to apply, and practical.

Agricultural College, Mich. A. J. COOK.

GETTING SEEDS OF SPIDER-PLANTS AND ROCKY MOUNTAIN PLANTS TO GERMINATE.

Looking over Sept. 1st GLEANINGS, page 709, comments on Æneas Walker, you say you can't make the spider-plant seed start in the greenhouses and hot-beds. The Bible teaches you your religion, and why don't you let nature teach you her laws? Have your gardener mix a quart of seed in a bushel of dirt, in a box. Let it freeze till wanted; then thaw it, and sow where wanted in the house or beds, and you will wish it in some other place. To some one who could not start any, I gave a pint of dirt from where they grew two years ago, to scatter in the plant-pot; and on inquiring about it he said he had more plants than he wanted. H. L. JEFFREY.

New Milford, Conn., Sept. 11, 1889.

HOW TO MAKE AND KEEP SOUR-KRAUT—INFORMATION WANTED.

Can't you give an article on making and keeping of sour-kraut? I have more or less difficulty in getting the stuff to keep. It spoils before half the winter is past. Some of my neighbors say, to keep sour-kraut I must freeze it solid during a cold snap; others say it is spoiled after being frozen. How is this? Another thing I should like to ask: Have you tried the Crandall currant, sent out by Frank Ford & Son? If it is as good as the introducers claim it to be, I must try it, even if a single bush costs more than a dozen of White Grape currants.

W. G. BRAINARD.

Gouverneur, N. Y., Sept. 27, 1889.

We have had a good deal the same trouble you mention. When we put our sour-kraut in clean crocks, however—say crocks holding toward a quarter of a barrel—we had no trouble. Perhaps some of our readers can help us a little.—We have Ford's Crandall currant on our place. It has fruited this year; but the berries are very few in number (although the bush is large and strong, being two years old), small in size, none of them being much larger than our largest cherry-currants; and last, but not least, we did not find them very good. Another thing that troubled me, the bush and fruit look almost exactly like an ornamental flowering currant bought some years ago of Storrs & Harrison, Painesville, O. I notice, however, that our neighbors, Ford & Son, write to one of our periodicals on gardening that the bushes seldom bear profusely until they are several years old; and, if I am correct, the yield of fruit does not seem to be uniform on different bushes.

Ours was on very rich ground, and has made a very rank growth. Perhaps it will do better when it gets older. Let us not be in haste to condemn new things.

HOW TO TELL WHEN WATERMELONS ARE RIPE.

I see in GLEANINGS for September 15 that Mr. M. L. Benedict, of Crete, Neb., wishes some one to tell how to know a ripe watermelon by sight; and as I consider myself an expert at this I will try to do so. My first crop was in 1874, when I had two acres of melons, weighing from 20 to 60 lbs., that lay so close together that a man could have walked in any direction and stepped only on melons. I then knew of no way of telling a ripe melon but by thumping, so I thumped till I wore the nails off all my fingers to the "quick," and was compelled to stop that method. I then had recourse to sight; and, either from instructions from others or my own observations, I have found the following indications good in the order named:

1. There grows on the vine at the joint, where the stem of the melon joins it, a tendril. When this dies it indicates ripeness.
2. There also grows at the same point a little rounded leaf that we call the "ear." When this dies, it more certainly indicates ripeness.
3. Turn the melon up and notice if any change has taken place in the shade of the part next to the ground. A slight yellowness indicates ripeness.
4. The upper surface becomes a little rusty, and changes its shade a little, just a little, about the difference there is between milk that has "set" and that which is fresh, when the melon ripens.

This is the indication upon which I mostly rely; and so expert have I become in its use that I can go into a field with three or four assistants and point out ripe melons faster than they can pull them. I can also tell pretty closely the degree of ripeness, so as to be able to pull them a day or two before they are ripe, and get them to market at just the right time.

Of course, there are variations, such as difference in varieties, soils, seasons, climate, and diseases of the vine, that experience alone can make us understand.

W. H. GREER.

Paris, Tenn., Sept. 23, 1889.

Thanks, friend G. I think you are about correct in the matter.

THE JESSIE STRAWBERRY, AND ITS ADAPTABILITY TO GREENHOUSE CULTURE, ETC.

The Experiment Station, Columbus, O., in their July report, state as follows:

JESSIE—(perfect). The present season is the first in which the Jessie has not been entirely satisfactory here. It seemed to be less vigorous and less fruitful than in former seasons. It is much more fruitful than Cumberland and Sharpless, but less so than Bubach. It takes first rank in appearance and quality of fruit, hence is valuable for amateurs and those who grow for home use only. As a market variety it is not without value, and is especially useful to plant with pistillate sorts. Mr. Farnsworth says: "Jessie is not a success with us—not productive enough." It proved to be the best for forcing of any variety tested, maturing quite as fine berries under glass as out of doors.

The last sentence is quite an interesting one to us here; for while we have not much ambition to produce strawberries in the winter time, if we can, by the use of sash in the spring, get them a few weeks earlier, it may

open a business that will compete successfully with that of shipping berries from the South.

Here is something from a friend, right in a line with the above:

A runner blossomed the last of August. In September, toward the last, it bore about eight or ten good-sized berries. Perhaps you can start some fall berries. Who knows, in these times?

WM. C. HOLMES.

Amity, Dekalb Co., Mo., Sept. 27, 1889.

This reminds me that our friend Dan White, of New London, Ohio, who raises strawberries on a considerable scale, as well as honey, informed me a short time ago that he had several runners that put forth blossoms, and bore fruit in the fall. Now, will our experiment stations or somebody else tell us what is necessary to make the Jessie do so every time? Who knows but that we can have strawberries here in the fall months as well as in California and Oregon?

TESTING NEW VARIETIES OF STRAWBERRIES AS THEY COME UP.

A word in regard to new strawberries in general. The *Rural New-Yorker* people say they have been for years testing every new variety that made its appearance. Some seasons the new berries that claimed wonderful things amounted to even 50 or 75; but after years of patient testing they have not a whole dozen worthy of being retained. The probability is, that this work must still be repeated for years to come. The strawberries recommended ten years ago, that are still under cultivation, are very few.

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MEDINA, OCT. 15, 1889.

As the earth bringeth forth her bud, and as the garden causeth the things that are sown in it to spring forth, so the Lord God will cause righteousness and praise to spring forth before all the nations.—ISA. 61: 11.

THE OREGON EVERBEARING STRAWBERRY.

A GOOD many of the friends have complained of the way in which the advertiser of these plants has used them. By the way, I will explain that our friend Seth Winquist is a boy of only 20 years of age; and when our friends learn that, I believe they will have a little more charity. You remember, that, when he first sent out the advertisement, I suggested that the price was too low. Our young friend soon found it out. Most of us, however, would have filled orders, even at a considerable loss, until another advertisement could appear, correcting the price. Our young friend, however, thinking it always fair and honorable to return the money, chose the latter plan; but so many orders were sent him that he was obliged to have printed circulars, pay

all postage, and do all the corresponding, for nothing. It was unfortunate for him to put the price so low to start with; but very likely as he grows in years he will also grow in judgment and wisdom. I think we can excuse him, can we not, even if his large advance in price does savor somewhat of speculation?

ANOTHER BEE-BOOK FROM GERMANY.

WE have just received from C. A. Schwetschke & Son, of Brunswick, Germany, a book devoted entirely to apicultural carpentry. The pages are 10 x 7, printed on fine calendered paper. This first number of the whole work contains 38 pictures of hives and out-apiaries and honey-houses. First we have, for instance, a most superb cut of the entire house or hive, as the case may be, and then a front sectional view, a side sectional view, and then the ground plan. The cuts show every piece used in the construction of the house, and its exact length, breadth, and thickness; in fact, the cuts give a better idea of the construction of the buildings than a personal inspection could possibly do. The typography of the book is of the very highest rank, and the entire work only increases our admiration for the scrupulous care and artistic eye of our German friends. All bee-keepers who can read German will find this work of great value, even in the construction of honey-houses of different shape from those represented. The work sells at 25 cts. a number, which is remarkably cheap. It is printed where Gravenhorst's book was, in Brunswick.

TOO MANY REMEDIES FOR FOUL BROOD.

THERE are remedies for foul brood almost without number. One claims that coffee is a sure cure; another that coal oil is the remedy; still another besmears his affected combs with a solution of sulphur, and he avers, that, since then, he has had no more trouble. The truth is, that, just as soon as Brown finds out that there is something irregular with the brood in one of his hives, he jumps at the conclusion that he must have foul brood. He straightway daubs the combs with a mixture of his own "get-up." Eureka! it's a success! He must needs go and publish it in some bee-journal. Of course, he did not stop to consider whether the little irregularity in the brood would have got well any way; much less, whether he had the real disease in the first place. There may be some reason in using a remedy that is a well-known antiseptic or a germicide; but when a foul-brood mixture is neither, and has no science nor even common sense to back it, it is the height of folly for you to fuss with it. It is well enough for scientists to experiment with a remedy; but a bee-keeper who owns a hundred or even a less number of colonies can not afford to risk his whole apiary. Don't try any thing else than the starvation plan, or, in isolated cases, complete extermination. These are sure.

The above was written by Ernest. I heartily indorse it; and I should say that the same system of reasoning should be applied to remedies for diseases that afflict the human family.

GIVING IT TO THE EDITORS.

ONE of our subscribers, Mr. J. M. Harris, seeing the comb-honey business maligned in the usual way in the shape of a clipping from Harper's *Bazar*, in his own paper, the *Cedartown Standard*, after showing the impossibility of the thing, called upon the editor, and the result of it was that Mr. Harris

wrote an article refuting it. After showing the impossibility of the thing, he winds up as follows :

My friends, do you believe such a thing can be done? "Well, Mr. Bazar said so, and we have no right to dispute it." But that is not the question. Do you believe such a thing can be done? "Well, we may not believe it, still we are not responsible for a sentiment copied from another paper." If you were called into court to testify, you would not be allowed to repeat the sayings of others, but would be required to tell what you know about it. Now, my friends, what do you know about artificial honey-comb filled with artificial (glucose or sugar syrup) honey?

Mr. A. I. Root, of Medina, Ohio, offered \$1000 four or five years ago for proof of artificial comb honey. Not taken yet.

Now, what I am trying to do is to show you that I think you are not justifiable in repeating what others have testified against a neighbor unless you have some grounds for believing the assertion is true. There are some people who try to make an honest living, and it matters not what their business is, if it is honorable.

If apiculture is not an honorable calling, but is made a pretense of to defraud the public, then it should be suppressed. On the other hand, if it is right for a man to keep bees for the purpose of producing a beautiful, nutritious, and healthy food, I think the man engaged in it should not be accused of being a fraud, without evidence to prove the fact.

J. M. HARRIS.

Good, friend H.! Let others go and do likewise, if they have a county paper in their midst that has published the usual slander.

NORTHWESTERN BEE-KEEPERS' CONVENTION.

I HAVE just returned from a two-days' session of the above convention in Chicago, just as we go to press. The attendance was quite good, and we had an exceedingly pleasant and profitable time, further particulars of which will appear in next issue.

BEAUTIFUL OCTOBER.

I HARDLY know why it is, but October of late years is getting to have wonderful charms for me. Some have said, that, inasmuch as it heralds decay and death to a large part of the vegetable world, it is a dismal month; but not so to me. May be it is because of the spirit of that little hymn I have referred to elsewhere—"Nearer my home." And I rather think, too, that it is because of the thought that centers in the little text, "Not to be ministered unto, but to minister." We have just had a copious rain. The sun is now shining brightly, and the rich mellow earth over the plant-beds is just in trim to dig and rake up fine; and the thought of getting outdoors and making things grow during these October days fairly makes my heart bound; and sometimes I feel like shouting for joy and praise. I do not know but I should feel ashamed of myself a little, to think that a man within a few days of being fifty years old should be feeling as buoyant as a schoolboy; and it may be all the effect of that little text about ministering and being a servant. And then the glorious thought that comes with the consciousness of whom I am striving to serve! It is not only a glorious thing to be a "king's daughter," but it is a grand and glorious thing to be a king's son; because, you know, the son is always expected to work (*minister*) a little *harder* than the daughter.

THE CANADIAN HONEY-PRODUCER NOT DISCONTINUED.

On page 809 we intimated in our letter to Dr. Mason that the *Canadian Honey-Producer* had been discontinued. This is a mistake; but I should not have stated this in public had I not supposed that the same had already been published in the *Bee-hive*;

but a careful search through its files shows that I was mistaken—that what I had in mind was the discontinuance of the *Queen-Breeder's Journal*. I regret this very much. I have received from Sect. Holtermann the following, which is no more than right that it should be published at this time:

BROTHER ROOT:—I do not like the idea of a change at this late date. For example, I write for several agricultural papers, and have drawn attention to the meeting in Brantford, and it is difficult to get every one notified of the change. Personally I should prefer Buffalo; but whether at this date the best interests of the association will be subserved by changing, I am inclined to doubt.

Romey, Ont., Oct. 12.

R. F. HOLTERMANN.

WHERE SHALL THE NEXT NATIONAL CONVENTION BE HELD? A WORD FROM ONE OF THE EDITORS OF THE CANADIAN BEE JOURNAL.

SINCE our article on page 809 of the present issue was in type, we have received the following from Mr. F. H. Macpherson, which will explain itself:

FRIEND ROOT:—I was surprised, when I received the advance proof you were kind enough to forward, to learn that a change of the place of holding the coming International was being talked of, and that the item which I penned for the *Canadian Bee Journal* of Sept. 18 was being taken as a basis. Please take notice, that the item referred to suggested Buffalo as the place of holding the International for 1890—not for the one just upon us. I do not know whether it has been understood in this way or not; but if the article be read through to the end, there should be no mistake.

I must say that I am opposed to making any change at this late date. Dozens of Canadians have arranged to be at Brantford, who will not go to Buffalo, especially those from the eastern counties. The building in which the meeting is to be held is spoken for, and railroad rates are about settled, while all the other necessary arrangements are completed.

Again, the majority of the local Ontario associations have appointed delegates, and these—not over-affluent societies—have doubtless counted well the cost of sending their delegates, while an extra expense of \$3.00 or \$4.00 will probably be the means of keeping them at home. Then, too, the Ontario Bee-keepers' Association at its last meeting passed a resolution calling "a special general meeting at Brantford, at the same time as the International," and the president, vice-president, and directors (15 in all) were appointed delegates.

As to the membership, Dr. Mason suggests that it is none of our business where the meeting is held. By "our" I mean all Canadians, outside of D. A. Jones and R. F. Holtermann. It is a well-known fact, that the great bulk of the membership each year comes from the vicinity where the annual meeting is held, and Canada will not be behind in this respect. As proof of my statement, take the Detroit convention: 68 out of 103 members were from Michigan, Ohio, and Ontario. If the association is international, surely Canadians have a right to an occasional meeting. But the greatest reason of all is, that the suggestion comes too late in the year. I trust that my writing will not be taken as presumption, as I am not a member, but hope to be.

F. H. MACPHERSON.

Beeton, Ont., Oct. 10, 1889.

Well, now, friend M., may be I have put my foot in it. If so, I shall try to draw it out as gracefully as possible. Let's see: It seems to me that your original editorial is a little ambiguous, or, rather, it conveys pretty directly the impression I got from it. After mentioning the fact that you had invited your American friends to be present at Brantford, you insert a "by the way" clause, which seems to be somewhat of an after-thought to the preceding. The clause in question, and the one which gave me the impression that you desired to change to Buffalo for 1889, reads as follows: "By the way, would it not be mere justice to place the holding of the *next* convention at Buffalo?" The underscored word is mine. Now, the question hinges on the little word *next*. I can not get any other meaning from it than that you meant the *coming* convention, for the close of this year, 1889. I do not see how the *next* convention could refer to the year 1890, when there is yet a convention to be held in between now and then. The reasons you give for holding it at Brantford are good; but would not these delegates be willing to pay just a little more for the sake of the privilege of seeing the Falls in winter? and is it not a fact that some of the delegates are nearer Buffalo than Brantford? and would not the general expense be thereby somewhat equalized? I am still in favor of Buffalo, though I am quite willing to accede to the wishes of the majority of the members. As Prof. Cook says, we all desire the best good for the society.

ERNEST.

GLEANINGS IN BEE CULTURE.

Books for Bee-Keepers and Others.

Any of these books on which postage is not given will be forwarded by mail, *postpaid*, on receipt of price.

In buying books, as every thing else, we are liable to disappointment, if we make a purchase without seeing the article. Admitting that the bookseller could read all the books he offers, as he has them *for sale*, it were hardly to be expected he would be the one to mention all the faults, as well as good things about a book. I very much desire that those who favor me with their patronage shall not be disappointed, and therefore I am going to try to prevent it by mentioning all the faults so far as I can, that the purchaser may know what he is getting. In the following list, books that I approve I have marked with a *; those I *especially* approve, **; those that are not up to times, †; books that contain but little matter for the price, large type, and much space between the lines, ‡; foreign, §.

BIBLES, HYMN-BOOKS, AND OTHER GOOD BOOKS.

8	Bible, <i>good print</i> , neatly bound.....	25
10	Bunyan's Pilgrim's Progress**.....	35
6	First Steps for Little Feet. By the author of the Story of the Bible. A better book for young children can not be found in the whole round of literature, and at the same time there can hardly be found a more attractive book. Beautifully bound, and fully illustrated. Price 50c. Two copies will be sold for 75 cents. Postage six cents.	
5	Harmony of the Gospels.....	35
3	John Ploughman's Talks and Pictures, by Rev. C. H. Spurgeon.....	10
1	Gospel Hymns, consolidated Nos. 1, 2, 3 and 4, words only, cloth, 10c; paper.....	05
2	Same, board covers.....	20
5	Same, words and music, small type, board covers.....	45
10	Same, words and music, board covers.....	75
3	New Testament in pretty flexible covers.....	05
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	A large book of 700 pages, and 274 illustrations. Will be read by almost every child.	
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	"The Life of Trust," by Geo. Muller**.....	1 25
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As many of the bee-books are sent with other goods by freight or express, incurring no postage, we give prices separately. You will notice, that you can judge of the size of the books very well, by the amount required for postage on each.

	Postage. 1	Price without postage.
12	A B C of Bee Culture** Paper.....	88
15	A B C of Bee Culture** Cloth.....	1 10
5	A Year Among the Bees, by C. C. Miller**.....	70
14	Bees and Bee-keeping, by Frank Cheshire, England, Vol. I.**§.....	2 38
21	Same, Vol. II.**§.....	2 79
	or, \$5.25 for the two, post paid.	
	Bees and Honey, by T. G. Newman.....	1 00
15	Cook's New Manual** Cloth.....	1 35
5	Doolittle on Queen Rearing**.....	95
2	Dzierzon Theory**.....	10
1	Foul Brood; Its management and cure; D. A. Jones**.....	09
1	Honey-as-Food and Medicine.....	5
10	Langstroth on the Hive and Honey-Bee**.....	1 40
15	Langstroth Revised, by Ch. Dadant & Son**.....	1 85
10	Quinby's New Bee-Keeping**.....	1 40
10	Queen-Rearing, by H. Alley**.....	1 00
4	Success in Bee Culture, by James Heddon**.....	46
	The Production of Comb Honey, by W. Z. Hutchinson**.....	25

	The Apiary; or, Bees, Bee-Hives, and Bee Culture, by Geo. Neighbour & Sons, England*§.....	1 75
	British Bee-Keeper's Guide - Book, by Thos. Wm. Cowan, Esq., England*§.....	40
3	Merrybanks and His Neighbor, by A. I. Root.....	25

MISCELLANEOUS HAND-BOOKS.

5	A B C of Carp Culture, **.....	35
3	A B C of Potato Culture, Terry**.....	35
	This is T. B. Terry's first and most masterly work. The book has had an enormous sale, and has been reprinted in foreign languages. When we are thoroughly conversant with friend Terry's system of raising potatoes, we shall be ready to handle almost any farm crop successfully. It has 48 pages and 22 illustrations.	
5	An Egg-Farm, Stoddard**.....	45
	Barn Plans and Out-Buildings*.....	1 50
	Cranberry Culture, White's.....	1 25
	Canary Birds; paper, 50c; cloth*.....	75
	Draining for Profit and Health, Warring.....	1 50
5	Eclectic Manual of Phonography; Pitman's System; cloth.....	50

6	Fuller's Practical Forestry*.....	1 40
10	Farming For Boys*.....	1 15
	This is one of Joseph Harris' happiest productions, and it seems to me that it ought to make farm-life fascinating to any boy who has any sort of taste for gardening.	

10	Fuller's Grape Culturist**.....	1 40
7	Farm, Gardening, and Seed-Growing**.....	90
	This is by Francis Brill, the veteran seed-grower, and is the only book on gardening that I am aware of that tells how market-gardeners and seed-growers raise and harvest their own seeds. It has 166 pages.	

10	Gardening for Pleasure, Henderson*.....	1 40
	While "Gardening for Profit" is written with a view of making gardening PAY, it touches a good deal on the pleasure part; and "Gardening for Pleasure" takes up this matter of beautifying your homes and improving your grounds, without the special point in view of making money out of it. I think most of you will need this if you get "Gardening for Profit." This work has 246 pages and 134 illustrations.	

12	Gardening for Profit, new edition**.....	1 85
	This is a late revision of Peter Henderson's celebrated work. Nothing that has ever before been put in print has done so much toward making market-gardening a science and a fascinating industry. Peter Henderson stands at the head, without question, although we have many other books on these rural employments. If you can get but one book, let it be the above. It has 376 pages and 138 cuts.	

	Gardening for Young and Old, Harris**.....	1 25
	This is Joseph Harris' best and happiest effort. Although it goes over the same ground occupied by Peter Henderson, it particularly emphasizes the thorough cultivation of the soil in preparing your ground; and this matter of adapting it to young people as well as to old is brought out in a most happy vein. If your children have any sort of fancy for gardening it will pay you to make them a present of this book. It has 187 pages and 46 engravings.	

10	Garden and Farm Topics, Henderson**.....	75
	Gray's School and Field Book of Botany....	1 80
5	Gregory on Cabbages; paper*.....	25
5	Gregory on Squashes; paper*.....	25
5	Gregory on Onions; paper*.....	25

The above three books, by our friend Gregory, are all valuable. The book on squashes especially is good reading for almost anybody, whether they raise squashes or not. It strikes at the very foundation of success in almost any kind of business.

10	Household Conveniences.....	1 40
2	How to Propagate and Grow Fruit, Greer*.....	25
5	How to Make Candy**.....	45
10	How to Keep Store*.....	1 00
2	Injurious Insects, Cook.....	25

	Irrigation for the Farm, Garden, and Orchard, Stewart*.....	1 40
	This book, so far as I am informed, is almost the only work on this matter that is attracting so much interest, especially recently. Using water from springs, brooks, or windmills, to take the place of rain, during our great droughts, is the great problem before us at the present day. The book has 274 pages and 142 cuts.	

10	Money in The Garden, Quinn*.....	1 40
3	Maple Sugar and the Sugar-Bush.**.....	35

By Prof. A. J. Cook. This was written in the spring of 1887, at my request. As the author has, perhaps, one of the finest sugar-campes in the United States, as well as being an enthusiastic lover of all farm industries, he is better fitted, perhaps, to handle the subject than any other man. The book is written in Prof. Cook's happy style, combining wholesome moral lessons with the latest and best method of managing to get the finest sugar and maple syrup, with the least possible expenditure of cash and labor. Everybody who makes sugar or molasses wants the sugar-book. It has 42 pages and 35 cuts.

1	Poultry for Pleasure and Profit**.....	10
11	Practical Floriculture, Henderson*.....	1 35
	Peach Culture, Fulton's.....	1 50
10	Profits in Poultry.....	90
2	Silk and the Silkworm.....	10
10	Small-Fruit Culturist, Fuller*.....	1 40
10	Success in Market-Gardening*.....	90

This is new book by a real, live, enterprising, successful market-gardener who lives in Arlington, a suburb of Boston, Mass. Friend Rawson has been one of the foremost to make irrigation a practical success, and he now irrigates his grounds by means of a windmill and steam-engine whenever a drought threatens to injure the crops. The book has 208 pages, and is nicely illustrated with 110 engravings.

3	Strawberry Culturist, Fuller*.....	15
10	Talks on Manures*.....	1 90
	This book, by Joseph Harris, is, perhaps, the most comprehensive one we have on the subject, and the whole matter is considered by an able writer. It contains 366 pages.	
2	The Carpenter's Steel Square and its Uses; Hodgson; Abridged.....	15

10	The New Agriculture, or the Waters Led Captive.....	75
2	Treatise on the Horse and his Diseases.....	10
3	Winter Care of Horses and Cattle.....	40

This is friend Terry's second book in regard to farm matters; but it is so intimately connected with his potato-book that it reads almost like a sequel to it. If you have only a horse or a cow, I think it will pay you to invest in the book. It has 44 pages, and 4 cuts.

8	What to Do, and How to be Happy While Doing It, by A. I. Root.....	50
3	Wood's Common Objects of the Microscope**.....	47

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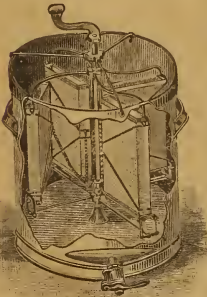
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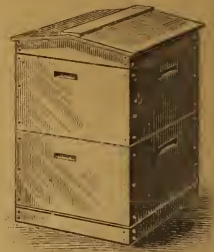
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Bee-keepers are realizing more and more the value of these cartons for putting their comb honey in marketable shape. Other articles of home consumption are put up in a neat attractive way, and in shape to be handed to the customer, and carried safely without wrapping. Why not sections of comb honey, especially when the cost of the boxes is so low?

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Name or designation.	Price of 1	25	100	500	1000
1-lb. carton, plain.....	2	.20	.60	2.75	5.00
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1-lb. carton, with lithograph label, one side.....	3	.30	1.00	4.50	8.50
1-lb. carton, with lithograph label on both sides.....	3	.40	1.30	6.25	12.00
1-lb. carton, with lithograph label one side, name printed.....			1.30	5.25	9.50
1-lb. carton, with lithograph label, printed with name on both sides, Lithograph labels, 2 designs, for 1-lb. cartons.....			1.70	7.25	13.50
			.35	1.60	3.00

If sent by mail, postage will be 2 cts. each; or in lots of 25 or more, 1 cent each. All the above have tape handles. Price, without tape handles, 5c per 100, or 75c per 1000 less. The quality of the boxes is fair, being made of strawboard, plated outside. If more than 1000 are wanted, write for prices.

A. I. ROOT, MEDINA, O.